

THE IMPACT OF KNOWLEDGE AND SKILLS ACQUIRED ON BUSINESS PERFORMANCE OF MALAYSIA AND INDONESIA TVET GRADUATES

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ABSTRACT

Malaysian Technical and Vocational Education and Training (TVET) institutions and Indonesian Vocational institutions aim to provide formal, non-formal and informal learning to prepare graduates with the required skills and knowledge needed in their career or business. A research was conducted to identify the impact of knowledge and skills acquired by engineering

graduates from Malaysian TVET institutions on business performance. This research also aimed to identify the problems and challenges faced by engineering graduates in business. Four TVET graduates who own businesses related to engineering field were interviewed using semi-structured questions. The data gathered were analysed using qualitative method. It was found that these graduates interviewed voiced up the importance of communication and technical skills to help them perform in their business. They also stressed on the importance of networking and motivation to start and sustain their business. Among the problems and challenges faced by Malaysian TVET graduates are lack of financial capital to start a new business, lack of knowledge on social media and difficulties to sustain business in period of weaken economic condition. Dynamic curriculum, management and technopreneurship-related courses and more up-to-date facilities were also suggested to help prepare future Malaysian TVET graduates in business.

Keywords: *TVET, Vocational, Technical skills, Business performance*

Introduction

In Malaysia, Technical and Vocational Education Training (TVET) institutions For centuries, economic growth is driven by innovation and technology. According to Balachandran (2018), technopreneurship, a new concept of entrepreneurship, involves the combination of people who are intelligent, driven, creative, tech-savvy and eager for calculated risk. The success

of technopreneurship hinges on how well everyone functions together as a team. Technopreneurship is a process of merging technology prowess and entrepreneurial talent and skills (Technopreneurship, 2013).

In technological globalization era, technopreneurs have to become authoritative in shifting forward the societies and economies all

over the world. Hence, there has been increasing attention to determine the technopreneurial intention among the students enrolled in business courses in Malaysian universities (Abu Shams, Zainudin & Benazir, 2017).

According to Star2.com (2018), technopreneur plays an important role in transforming Malaysia into a knowledge-based economy. Among the government and government-related agencies that have contributed to the start-ups of many technopreneurs are MDec, Malaysian Global Innovation and Creativity Centre (Magic), and Cradle Sdn Bhd. These agencies offer funding opportunities, business advisory services and physical infrastructure (Star2.com, 2018).

Technopreneurs are people who combine technology with their entrepreneurial skills and knowledge in the hope of impacting the society with something positive (Alto, 2017). Technopreneur introduces new products and services, by creating new forms of organizations and by exploiting new raw materials. He perceives an opportunity and creates an organization to pursue it. Technopreneurshave

the ability to accumulate and manage knowledge, as well as their ability to mobilized resources to achieve certain business or social goal (Technopreneurship, 2013).

Statement of Problem

The main issue reported from the industries are the lacking of product quality and skills possessed by the students. Although the system fundamentally designed to meet observed or projected labor market demands, the current TVET programs in Malaysia are largely supply-driven and still lack giving emphasis to match training to available jobs. Training institutions also seldom track the employment destination of their graduates. Consequently, the institutions have not taken advantage feedback from past trainees on the quality of the training they have received to improve their curricula and training packages. In short, the implementation of outcome evaluation and tracer studies that can improve the market responsiveness of training programs is still lacking. The overall funding structure also does not fully support quality and performance of TVET providers.

Ministry of Higher Education Malaysia, under the Malaysian Higher Education Development Plan 2015–2025, has implemented a few strategies targeted to ensure that 15% of students become entrepreneurs during their study by the year 2020 and 5% choose entrepreneurship as their career when they graduated. Entrepreneurship education for students in higher education institutions, namely through the implementation of Digital Entrepreneurship course, may instil interests and increase the tendency of students to venture into entrepreneurship.

Introducing entrepreneurship to Engineering students is relatively new and will require quite some time to be able to quantify or assess the effectiveness of the program (Li et al., 2016). The effectiveness of entrepreneurship education on graduates' competency is yet to be assessed. Therefore, this study is conducted to examine the impact of knowledge and skills acquired on business performance of Malaysian TVET graduates.

RESEARCH OBJECTIVES

The main objective of this research was to examine the impact of knowledge and skills acquired from TVET institutions towards enhancing engineering graduates' performance as entrepreneurs. Therefore, this study attempts to seek answers to the following research questions:

- 1) What are the skills and knowledge that graduates acquired from their education that are relevant to their job?
- 2) To what extent does entrepreneurship education increase the competency of students in business and technology?
- 3) What are the challenges that the graduates face in setting up their businesses?

RESEARCH METHODOLOGY

This research is conducted using a qualitative approach. The method that is used in obtaining the data is through a series of interview on four selected male respondents in early 20's. They were engineering students who graduated from TVET institutions and are now working as entrepreneurs. Throughout the study, they will be identified as Asyraf, Bob, Afiq, Fariq. Susdek, Ahmad, Ryan, Abdi and Parulian graduated from a polytechnic and hold a Diploma in Mechanical

(Automotive) Engineering. Both of them are now in construction businesses. Bob also graduated from a polytechnic with a diploma in Automotive Engineering, but later pursued his study at a university in the same field. After graduating, he opened up an automotive workshop and a car accessory shop. Asyraf graduated from a university with a degree in Mechanical Engineering. He started his business when he was still a student, and later continued after his graduation.

The interviews were conducted in order to explore and gather information on the following aspects:

- a) The impact of knowledge and skills acquired from TVET institution towards enhancing engineering graduates' job performance.
- b) The relevancy of knowledge and skills acquired from TVET institutions towards enhancing engineering graduates' job performance.
- c) The challenges faced by engineering graduates at the workplace.

The interviews with the respondents were recorded and then transcribed.

LITERATURE REVIEW

The application of technology is transformed into technology based business play a major role in entrepreneurship (Selladurai, 2016). Technopreneur is an entrepreneur who is technology savvy, creative, innovative, dynamic, dares to be different, takes the unexplored path and is very passionate about his/her work (Nasution et al. 2007). Individuals who possess technopreneurial traits take challenges and strive to lead their life with greater success. The personality traits of technopreneurs include not having fear to fail, taking failure as a learning experience, and adept at looking at things differently, and always looking for the next challenges (Cereiyo 2002; Depositario et al. 2011).

The combination of technology and entrepreneurial skills will produce a technopreneur. Technopreneurs simply means that a a person who uses technology as part of their business model. Technopreneurs involve

people who make or found their own technology-based business by recognizing the opportunities and organizing the resources (Ibrahim et al. 2015; Yudha 2010). Meanwhile, technopreneurship is a result of the synthesis and re-engineering process in the future by combining the know-how in technology and entrepreneurial skills to create a new and versatile business model.

Entrepreneurship education is a planned model to change knowledge, skills and attitude through learning experience (Othman &Ishak, 2011). Entrepreneurship education is capable to instil the tendency of individuals towards career in business (Pihie&Bagheri, 2011).

RESEARCH FINDINGS AND DISCUSSION

TVET respondents

The interview sessions with the four respondents have provided answers to the research questions.

1. What are the skills and knowledge that graduates acquired from their education that are relevant to their job?

All the four respondents agreed that the education that they received has provided them with some important skills and knowledge that benefit them as entrepreneurs. However, the respondents gave different answers to the question. As a polytechnic graduate, Afiq feels that AutoCAD is a very useful course that benefits him in his business today. Afiq also learns a lot from his Communicative English classes where he improves not only his English language proficiency but also his communication and presentation skills. He has a number of clients who prefer speaking in English, so being proficient in English helps to build his confidence in communicating with them. Asyraf gives a different answer. While he was a student, he had a lot of experience in conducting businesses when taking part in numerous entrepreneurial activities. He believes the business opportunities that he had when he was a student have provided him some important skills in doing business. He also believes that through the business experience he has developed and improved his communication skills as well. Bob and Fariq, on the other hand, believe that the technical skills and knowledge that they acquired from their studies

helped them in their businesses today. Bob acquired technical knowledge and skills especially related to automotive engineering whereas Fariq thinks the knowledge he acquired from his materials and strength course helps in his construction business.

2. To what extent does entrepreneurship education increase the competency of students in business and technology?

Asyraf and Bob think that entrepreneurship education helps in increasing their competency in business. They have a lot of practices in setting up their business while they were studying at the university. They also had opportunities to meet successful businessmen in their business programmes conducted by their universities. However, Bob points out that compared to the university, polytechnic still has a lot to improve in entrepreneurship education. He believes that entrepreneurship curriculum has to be improved so that students will learn not just all the business aspects but also how to groom themselves to become entrepreneurs. In terms of technology, all the four respondents agree that knowledge in technology is important for business. One must

be equipped with the knowledge on the current technology which is related to their field, as well as other type of technology, such as the social media, as a communication tool. For example, Fariq believes that to be successful in the construction business, one must always keep his knowledge updated about latest technology in construction.

3. What are the challenges that the graduates face in setting up their businesses?

All respondents agree that money is the main problem that they faced when setting up their businesses. As they opened up their business just after they graduated, they did not have sufficient amount of money for their capital. As a result, they had to borrow from their family and friends.

Another challenge that they face is in meeting up with customers' satisfaction and expectations. Both Afiq and Fariq confess that they often have difficult customers. According to Afiq, to deal with this type of people, he has to have good communication skills and needs to demonstrate his knowledge in the field. Fariq also feels that dealing with difficult customers can be quite

challenging. Therefore, he needs to show his capability by updating his knowledge and improving his communication skills as there will always be a lot of explaining and negotiating.

Sustaining the business is also another challenge that the four respondents face. In the period of weakened economic condition, they feel that they need to be more creative in marketing their businesses. Networking helps to solve this problem. The respondents also feel that they have to possess a high level of motivation as well in order to be competitive.

Polmed respondents

The interview sessions with the five respondents have provided answers to the research questions.

1. What are the skills and knowledge that graduates acquired from their education that are relevant to their job?

All respondents agreed that the education they received provided them with some important skills and knowledge that benefited them as

entrepreneurs. However, respondents gave different answers to that question.

As a polytechnic graduate, Abdi felt that while he was a student at Polmed, the lessons he had received while being a mechanical engineering student were very useful in his current business. Abdi also learned how to create an egg warmer (incubator) for his business to grow.

Ahmad and Rian give different answers. When Ahmad was a student, he had a lot of experience in running a business. When he was in school, he had started to learn to do business by selling some accessories. When he was a student he tried to develop his entrepreneurial spirit. Ahmad believes the business opportunities he had when he was a student gave him several important skills in doing business. After graduating from Polmed, Ahmad tried to cultivate a culinary and printing business that he started himself. Ahmad believes that through learning from the campus about entrepreneurship and also the spirit of entrepreneurship can develop and improve their skills.

Not much different from Ahmad, Rian also opened a printing business that he pioneered with his friend. With the encouragement of Polmed

(the entrepreneurship course) and also the desire to become an entrepreneur, he wants graduates to be able to change their mindset not only as employees, but also as entrepreneurs.

Susdek, on the other hand, believes that the technical skills and knowledge gained from studies help in his business. Susdek obtained technical knowledge and skills, especially those related to mechanics and machinery. Susdek believes that the knowledge he obtained from the material and sharing of knowledge became his strength to help in his palm oil manufacturing business.

2. To what extent does entrepreneurship education improve student competencies in business and technology?

They agree that entrepreneurship education can help in increasing their competence in the business field. They are optimistic that if the entrepreneurship curriculum is further improved, students will not only learn in theory about business but also how to prepare themselves to become entrepreneurs. In terms of technology, the four respondents agreed that knowledge in technology is important for businesses related to

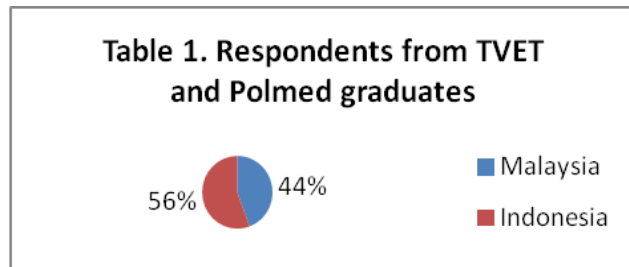
their fields, as well as other types of technology, such as social media, as a communication tool to introduce their businesses / products. For example, that to be successful in the palm oil manufacturing business, Susdek must be able to see the market and how to apply the knowledge gained during college to make machines related to his business.

3. What are the challenges faced by graduates in establishing their business?

All respondents agreed that capital (money) was the main problem they faced when establishing their business. When they open their business as soon as they graduate, they don't have enough money for their capital. As a result, they have to borrow from family, friends or funds from their own sources such as the salary they have collected from their previous work.

Another challenge they face is customers and business rivals. Because not only those who open a similar business, many other business actors are accompanied by those who also have creative ideas and perseverance in running a business. According to them, running the business itself

has become a challenge, making them more motivated to become entrepreneurs who can later open up business fields for many people and of course they must have more value and innovation so that their businesses can still compete with others.



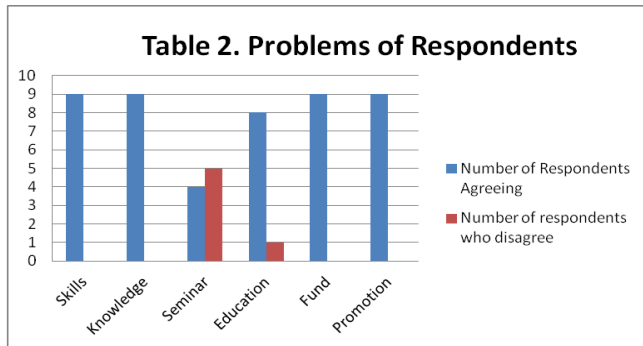
After interviewing 9 respondents from Indonesia and Malaysia, it turns out that they all agreed that the skills and knowledge they had acquired while in polytechnic had a great impact on their current work. They can apply the knowledge gained during lectures into business (their current job). Besides that, the entrepreneurship education they received turned out to be enough to equip them when they ran their businesses, at least they had the basics in developing their businesses. However, of the nine respondents,

there was two respondent who felt that the entrepreneurship education he received while at the polytechnic was felt to be lacking. They argues that entrepreneurship education is not only sufficiently learned in theory, but also be practiced by creating business groups between students, so that they can learn and analyze the knowledge they have received with the actual situation. What obstacles they received and what strategies they had to make in order for their business to run. In contrast to respondents from Malaysia, respondents from Indonesia, especially Polmed, wanted polytechnics to hold more entrepreneurial seminars, so that students were more interested in their interests and get special tricks in running a business as a beginner entrepreneur.

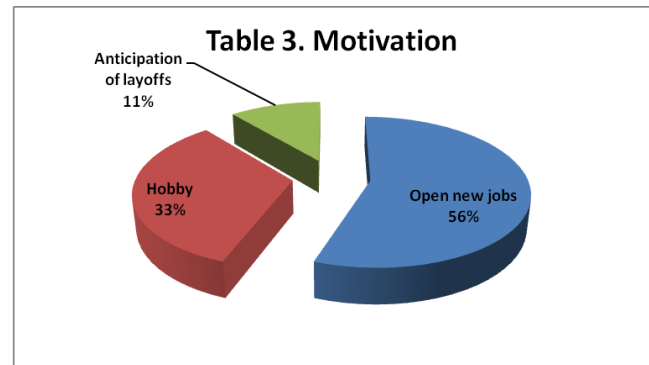
Nevertheless, it turns out that the main factor possessed by all beginner entrepreneurs based on the 9 respondents who exist in running their business agree that money is the biggest inhibiting factor. Of course this is not their basic reason for not starting their business. They are looking for ways to build their businesses with minimal funds. One of the ways that they

traveled was by borrowing funds from family and friends. Some respondents stated that they also collected from a portion of the salary they had received at the previous company to start their business.

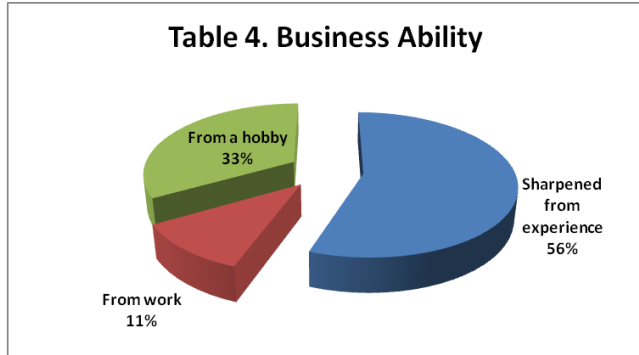
They also realize, in business, of course they have rivals. They try hard so that the business they run can grow, one of the ways is by promoting their business through social media. They agreed that in running a business, high creativity and extensive network are needed so that their business can develop better.



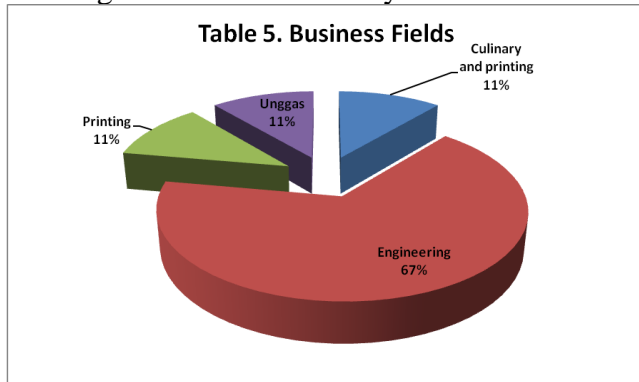
From Table 2, almost all respondents interviewed answered that the most basic problem in starting entrepreneurship was a matter of skill, knowledge, funding and promotion. A small number felt the need to attend a seminar to be able to improve their business capabilities.



From Table 3. It is seen that more than half of the respondents started doing business because they wanted to create new jobs and only a small proportion (11%) felt the need to do business to anticipate if later the day they were laid off from their current jobs.



From Table 4, more than half of the respondents get business skills from experience, 33% are developed from hobbies and 11% get it while working in the formal industry.



From Table 5, the occupied Business is currently engaged in engineering, and only a small portion is outside it, such as printing, unggas livestock and culinary business.

CONCLUSION

The entrepreneurship education at TVET institutions in Malaysia and Indonesia is found to be an effective way to inculcate entrepreneurship values to the students. Although there are a lot of entrepreneurial programmes that are organised which aim to develop students' entrepreneurial skills, the government needs to improve the curriculum which is more dynamic and can train the students not just in running a business but also in planning and managing part as well.

Entrepreneurship education in the world of education is very good to be implemented and followed up on more deeply, because students are not only taught aspects of business but also how to run it. With entrepreneurship education, the mindset of students is formed not only as workers, but how to become an entrepreneur (entrepreneur) and can create jobs. As is happening in the modern era, it is easier for business people to run their businesses, assisted

with digital promotion (through social media). In this case, the graduates also get benefits during their lectures, such as knowledge in terms of machine work or making machines that can be applied to facilitate their business.

With the positive responses from the students, Medan State Polytechnic is expected to be able to make more seminars on entrepreneurship so that students can change their mindset and can foster an entrepreneurial spirit.

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It is also hoped that the government can support entrepreneurship education programs to be more developed, so that later students are not only focused as workers, but rather become an entrepreneur, which in addition to reducing unemployment can also help the economy of the country of course.

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