

## Entrepreneurial Mindset Among Students of Technical and Vocational Education and Training (TVET) Institutions in Malaysia

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### Abstract

This article examines entrepreneurial mindset among the students of Technical and Vocational Education and Training (TVET) institutions under the Ministry of Higher Education Malaysia. The findings presented are a small part of the overall research data on the readiness of TVET students in Malaysia to venture into entrepreneurship. This quantitative study involves 1000 students from eight selected public TVET institutions in Peninsular Malaysia. Overall, the study finds that respondents' level of entrepreneurial mindset is at a moderate level. Furthermore, there is a significant difference in the level of entrepreneurial mindset between the respondents at the certificate level and diploma level, the background of the family/parents who own businesses and otherwise, and also between the respondents who are involved and not involved in business activities. This study holds a positive view that there is potential in enhancing the entrepreneurial mindset of students in TVET institutions in order to generate as many job creators as possible. Hence, the study suggests that the Ministry and all relevant stakeholders to streamline the strategy of the Higher Education Institution (HEI) Entrepreneurship Action Plan by focusing on the key growth factors of entrepreneurial mindset so that the target of new entrepreneurial talents among HEI students can be realised and also by taking into consideration the potentials of TVET students in Malaysia.

**Keywords:** Entrepreneurial mindset; TVET student; Job creator; TVET institution.



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### 1. Introduction

The Higher Education Institution (HEI) Entrepreneurship Action Plan 2016-2020 targets that 100% of HEI students will be exposed to entrepreneurship values and attributes by the year 2020 under the Holistic and Integrated Curriculum Development Strategy through the Initiative: Implementing High Impact Education Practice (HIEP) by applying entrepreneurial elements across the curriculum and field of study. In addition, the Ministry targets 5% from the number of HEI graduates will be self-employed or make entrepreneurship as an optional career by 2020 through the Initiative: Implementing Job Creator Framework, which is located under the Learning Support System Strengthening Strategy. The target participation of 5% from the number of HEI graduates in entrepreneurship is across the field of study and is inclusive of the technical and vocational education and training (TVET) stream. This is because the HEI Entrepreneurship Action Plan 2016-2020 applies to all 20 public universities including the Department of Polytechnic Education and the Department of Community College Education.

The 10th Malaysia Plan (10MP) for the duration of 2011-2015 has shown dramatic planning in Malaysia's Technical and Vocational Education (TVET) system. This is due to the government's strategy to mainstream TVET towards providing an alternative to the society especially youths so that their full potential is highlighted according to their own talents and self inclinations. The statistics up to year 2010 show that the number of student production in the technical field is 28,171. Moreover, the student intake in public technical and vocational training institutions increased by 1.5% per annum following the construction of 10 skills training institutions and the upgrading of 16 existing institutions ([Government of Malaysia, 2010](#)).

In the current era of the 4th Industrial Revolution (Industry 4.0), the drastic development of the Malaysia's TVET system should be effective in forming a job creator 'DNA' (deoxyribonucleic acid) with the additional goal of generating professional, skilled and semi-skilled workforces. This is because TVET graduates are not only regarded as highly skilled, knowledgeable and innovative people who are required in certain sectors in the labour market but are also considered capable to generate employment because of the important features associated to them. This statement is in line with Vision 2020 which was once inspired by the Honorable Prime Minister, Tun Dr. Mahathir Mohamad, who wishes Malaysia to be seen not only as a country of technology users but also as a creator of

technology who will simultaneously produce many technocrat entrepreneurs who are experts in their fields and generate more job opportunities.

The entrepreneurial field is viewed as the best mechanism for reducing unemployment among youths in Malaysia especially among HEI graduates. Entrepreneurs are viewed to have the potential of generating the nation's economic growth by acting as job generators. It is general knowledge that Malaysian youths especially HEI graduates are currently facing a fierce challenge to find a place in their choice of careers. This is due to the growing expectations of employers and job challenges, where graduates are not only assessed in terms of academic qualifications, but also in terms of capabilities and other value added skills. The growth of employment structure in a slow-paced country that is unable to accommodate the growing number of graduates (Nooriah *et al.*, 2013) is seen to continuously put pressure in the existing labour market. The problem of graduates' dependence on job market opportunities is not a new issue in Malaysia (Masidi, 2014). Now, the challenge of Industry 4.0 has the prospect of creating multiple effects when the emphasis on the Internet of Things (IoT) or the construction of virtual reality technology gradually takes on the intensive labour in the job market.

The involvement of people working in the entrepreneurial field can generate economic growth, create job opportunities, and reduce unemployment rate (Department of Statistics Malaysia, 2009). The efforts to strengthen entrepreneurship either towards the development of entrepreneurial mindset or the inclination to become entrepreneurs through education have proven to increase graduates' marketability, solve unemployment issues among youth, increase the socio-economic level of the society and reduce the gap between rich and poor class (Ministry of Higher Education, 2016).

Accordingly, the challenges faced by the higher education sector are seen to be as challenging in the future since HEI is perceived to play a role in producing human capital to fill up future employment in the nation's development sector. To address this challenge, it is inevitable that the higher education sector should focus more on being committed to produce as many job creators as possible in various entrepreneurial fields through the generated graduates. This is because the Ministry's record in 2016 shows that the number of HEI graduates who ventured into entrepreneurship after completing their studies shows a very small percentage of about 2% of the total number of graduates each year. Therefore, the integrated collaboration and support from all counterparts, especially to the higher education sector, should be cultivated effectively. This is to create as many job creators in the country's labour market, starting with developing entrepreneurial thinking amongst TVET students towards generating more entrepreneurial talent amongst them.

## 2. Entrepreneurial Mindset Concept

According to Thum (2012), mindset is a number of knowledge that exists in a person including one's beliefs about the world one is in which filters out the information one has acquired. The mindset will ultimately determine how one receives and responds to such information. Dweck (2006) believes that one's mindset can be improved or, in other words, it is growth oriented. According to her, although a person's mind only assumes a fixed set of talents and abilities, the growth of the mind has the potential to rapidly develop one's talent and ability. Hence, she points out that one's mindset can change where most of it happens through increasing awareness of current thinking as well as through steps to start thinking and responding in a new way.

Gupta and Govindrarajam (2002) describe that as a human being, one is limited in terms of one's ability to absorb and process information. Therefore, one is always challenged by the complexities, ambiguities and dynamics of information in the surrounding environment. Subsequently, one will deal with the challenge through the filtering process. One will usually be selective towards the information one receives besides having a certain tendency on how to interpret it. The term mindset refers to this cognitive filter. Mindset is said to be a product of one's personal history and develops through interactive processes. Meanwhile, a person's current mindset will continue to drive data collection and interpretation of new information.

In addition, according to Drucker (1985), the term 'entrepreneur' derives from the French word '*entreprendre*' which refers to someone who runs a business. According to him, the term that emerged around 1800 was triggered by a French economist Jean Baptiste Say who explains that entrepreneurs act to divert a resource from low value to high productivity and yield. Therefore, this change in value is referred to as the essence of entrepreneurship. Scholars such as Joseph Alois Schumpeter considers entrepreneurs as someone who is non-passive, always looking for innovations and links entrepreneurs to the elements of innovation that exist in a person (Filion, 2011). Entrepreneurs are seen to always have a high requirement of achievement (McClelland, 1965). Drucker (1999) states that entrepreneurship is not something related to heredity, but it is a discipline that can be learned.

Citing the Small and Medium Enterprise Annual Report (SMI) 2015-2016 by SME Corp. Malaysia, a Central Agency under the Ministry of International Trade and Industry Malaysia, the report mentions that the definition of entrepreneurship has changed along with the evolution of the business landscape. Apart from the process of identifying and starting a business venture, finding and compiling the required resources and taking risks and rewards related to the venture, the term entrepreneurship has been redefined by incorporating the elements of skill identification, evaluating viability, and exploiting and expanding opportunities to create new products and services to produce a profitable business venture that is able to withstand difficulties and failures.

Therefore, a brief research done separately on the terms of mindset and entrepreneurship has provided some insights into the concept of entrepreneurial mindset itself. Scholars of the entrepreneurial fields explain entrepreneurial mindset as an unstructured concept of thinking and differs from traditional straightforward thinking (Clouse *et al.*, 2003; Higdon, 2005). Moreover, most of the scholars conclude that among the dimensions of

entrepreneurial mindset is the ability of a person to identify opportunities, creativeness and innovativeness, and the ability to bear risks and tolerate ambiguity.

Ab (2010) defines entrepreneurs as agents of change that have their own distinctive features. They are able to identify opportunities and link those opportunities with user groups. He states that there are eight entrepreneurial characteristics which are readiness to lead, tendency to analyse a situation, having clear mission, vision, and goals, readiness to seize opportunities, being creative and innovative, being confident with the capacity and having the ability to plan, lead and control business activities. According to him, an entrepreneur can be developed through education system.

Meanwhile, Barjoi (2000) views entrepreneurship as the attitude, value, knowledge and skills that enable a person to efficiently search, recognise, gain opportunities and translate strategies and business ventures to generate profits. According to him, the personality traits of an entrepreneur are confident, humanitarian oriented, task-oriented and decision-oriented, future-oriented, always willing to take risks, able to make decisions, able to plan and manage, authentic and able to control the business.

Samsul (2004) describes entrepreneurs as individuals who have the psychological drive to accomplish high achievements in every effort towards profitability. Although this drive is regarded as the will power of every individual, she also acknowledges that this drive is also influenced by many other factors such as education, initial guidance and background of the individual. According to her, entrepreneurial characteristic refers to the personalities that must exist in entrepreneurs whereby these personalities influence how they act, how they interact with situations and their readiness to deal with risks and uncertainties. Besides that, other characteristics of an entrepreneur include being persistent, enthusiastic, responsible, confident, courageous, independent, perceptive, perseverant, visionary, creative and proactive (Abu, 2006).

Based on the Theory of Planned Behaviour developed by Ajzen and Fishben in 1980, a person's decision is guided by the rational assessment of the consequences of a behavior, in which the intention indirectly determines a person's behavior (Ajzen, 1991). This theory is often used by many researchers to examine one's inclination towards something. This theory brings forth three determining factors to one's true intentions and behaviours which are attitude, subjective norms and behavioural control. In other words, these three factors are said to directly influence intention, and then influence actual behaviour. Behavioural control is also said to directly influence real-life behaviour.

### 3. Past Research

There are many studies that examine the entrepreneurial potential involving multi-lingual students in Malaysia including TVET students and the factors that influence them and at the same time these studies measure the students' inclination to venture into entrepreneurship. Previous studies have indeed found a significant amount of entrepreneurial potential that exists among students in Malaysia. However, their level of inclination to venture into entrepreneurship is not the same (Wan *et al.*, 2016). Although McClelland (1985) explains that there is a significant relationship between certain entrepreneurial competencies in their entrepreneurial competence instruments that are seen to affect the success of an entrepreneur in the context of Malaysian students; however, most of the similar studies only examine the current likelihood of students to venture into entrepreneurship in the future and not after students become entrepreneurs. For example, the study by Azmi *et al.* (2012) found that even though the students in the survey has shown a high level of entrepreneurial potential and characteristics, the inclination of respondents in choosing entrepreneurship in the future is at moderate level. Their study involves 50 students who actively participate in entrepreneurship activities in three schools in the district of Batu Pahat, Johor.

In addition, a study conducted by Mimi *et al.* (2016) has identified entrepreneurial characteristics and skills among 130 female trainees in the Clothing Fashion Design Programme at two selected skills training institutions and has found that the respondents possess entrepreneurial characteristics such as creative and innovative, bold in taking risks, and high levels of self confidence and motivation. The study also found that apart from problem solving skills, business management skills, and leadership skills, the trainees' communication skills and information technology skills are also at high levels. Besides, there is a significant difference in entrepreneurial characteristics between the two training institutes as examined in terms of their boldness in taking risks, self-confidence and information technology skills. However, this study does not measure respondents' inclination to venture into entrepreneurship in the future.

Furthermore, a study by Zaidatol *et al.* (2002), which aims to re-evaluate the impact of entrepreneurial education on the aspirations of students in choosing entrepreneurship as a career, finds that the respondents as a whole have entrepreneurial attitude and characteristics that are positively moderate. This study which involved 1336 form four students across the country revealed that respondents with high achievement in *Penilaian Menengah Rendah* (PMR) had lower entrepreneurial potential compared to those with low achievement in PMR.

A research done by Norfadhilah and Halimah (2010) which involves 420 students of three selected public higher education institutions (HEI) shows that overall, the respondents are still not interested in becoming an entrepreneur even though more than 80% of them displays a positive attitude towards a business career. Their research found the respondents to have a very high level of entrepreneurial characteristics, except for the entrepreneurial characteristic of taking risks. Among the factors that contribute to the choice of a business career are the orientation of profit and the desire for success in life. The findings also display the occurrence of positive and significant correlation between the entrepreneurial characteristics, the attitude towards business career and the interest in business career. This research also found that the factors of race, family and the students' field of study contribute in choosing the business career.

Next are some examples of other studies that focus on Malaysian students' inclination to venture into the entrepreneurial field. In his research which involved form four students from the engineering craftsmanship stream in Sekolah Menengah Teknik Sungai Buloh, [Omar \(2004\)](#) found that the interest of respondents in entrepreneurial field is at the moderate level. In a wider scope, the research of [Zaidatol and Afsaneh \(2011\)](#) found that the students from technical and vocational secondary school regard their self worth as high towards the entrepreneurial field. A research by [Nurazlinda and Suaiza \(2017\)](#) which involves TVET students at the HEI level found that the students in the Department of Mechanical Engineering of Politeknik Sultan Salahuddin Abdul Aziz Shah have the inclination to venture into entrepreneurial field after they have attended entrepreneurial courses offered by that polytechnic. Their research found that the course attended by the respondents succeed in increasing their interest, confidence, capability and spirit in venturing into entrepreneurial field.

Besides, a study by [Puspawati \(2013\)](#) which involves the students of Manpower Department Training Institutions discovers that the respondents have a high inclination to venture into entrepreneurial field. This study involves 317 respondents among the final year students of five Manpower Department Training Institutions (ILJTM) from the south zone. Meanwhile, a study by [Salmianti \(2013\)](#) on the students of Bandar Penawar Community College found that the inclination of male students to venture into the entrepreneurial field is higher compared to the female students. The residential location factor on the other hand shows that more students who originate from the rural area tend to venture into entrepreneurial field than students who are from the urban area. However, her study found no significant difference in the stated factor. Only the family background factor is seen to have significant difference in this study, where students with entrepreneurial family background have more inclination in getting involved in the entrepreneurial field compared to students with opposite family background.

A research by [Siti \(2009\)](#), on the other hand, shows that family members, friends other than those from moral support and advice group are seen to influence the inclination of students in making decision to venture into entrepreneurial field. Her study involves the final year students of the engineering bachelor's degree from Universiti Sains Malaysia, Universiti Teknologi MARA Pulau Pinang and Universiti Malaysia Perlis. In contrast, [Norisham \(2008\)](#) research found that the inclination of students from Institut Kemahiran MARA Johor Bahru to venture into entrepreneurial field is associated with the factor of entrepreneurial skills such as the ability to construct a business plan, the ability to evaluate business opportunities and the ability to adapt and work in a team.

## 4. Methodology

This study applies the quantitative method. Data is collected through a questionnaire that is self-administered by the respondents. A simple random sampling is used by involving 1000 respondents among the students of selected community colleges and polytechnics under the Ministry of Higher Education Malaysia. This nation wide research involves four selected community colleges and four selected polytechnics in Peninsular Malaysia in the north zone, the south zone, the east zone and the west zone. The field study took a month and it was done on March 2018. Data is analysed by using descriptive and inferential statistic. Mean score and standard deviation are used to measure the entrepreneurial mindset level of the respondents. Meanwhile, the Independent t-Test is used to find out whether there is any significant difference in the entrepreneurial mindset of respondents based on some selected demographic variables.

## 5. Findings and Discussion

### 5.1. Profile of Respondents

[Table 1](#) sums up the selected demographic profiles of respondents. This study involved 54.8% male respondents while 45.2% are females. A percentage of 52.2% respondents are currently studying at diploma level while the rest (47.8%) are studying at certificate level. Majority of respondents (52.2%) state that they have never attended any entrepreneurial course. However, this percentage is not too significant compared to the percentage of respondents who have attended entrepreneurial courses, which is 47.8%. The respondents are asked if they are currently involved in any entrepreneurial activities. 54.9% of them respond negatively, while 45.1% of them gave an affirmative response. Opportunity to gain income can be seen as the most prominent reason (30.5%) for the respondents to be involved in entrepreneurial activities. It is followed by occupying free time (21.8%), covering educational expenses (20.3%), hobby/merely interest (17.6%), family/teacher/friend encouragement (15.8%) and others (2.4%) as a reason to lighten the family burden other than the compulsory entrepreneurial subject offered in their current learning institution. The respondents are also asked if their family/parents are involved in any entrepreneurial activities. Data shows that 61.4% of them responded no while the rest (38.6%) responded affirmatively.

**Table-1.** The Demographic Profile of Respondents (n=1000)

Background	Percentage
Gender	
Male	54.8
Female	45.2
Level of education	
Certificate	47.8
Diploma	52.2
Attended entrepreneurial course	
Yes	47.8
No	52.2
Currently involved in entrepreneurial activities	
Yes	45.1
No	54.9
Reason of involvement in entrepreneurial activities	
Hobby/merely interest	17.6
Occupying free time	21.8
Covering educational expenses	20.3
Opportunity to gain income	30.5
Family/teacher/friend encouragement	15.8
Others	2.4
Family/parents involving in entrepreneurial activities	
Yes	38.6
No	61.4

## 5.2. Entrepreneurial Mindset

5-points Likert Scale which is (5) Strongly Agree to (1) Strongly Disagree is used to measure the entrepreneurial mindset of respondents. Subsequently, their level of entrepreneurial mindset is determined by calculating the overall mean of the measurement of construct, and then dividing with the sum of entrepreneurial mindset item in order to produce the overall mean. As a whole, this study found the respondents to have a moderate level of entrepreneurial mindset [M=3.5972, SP=.58854]. **Table 2** displays the entrepreneurial mindset level of respondents based on the findings of overall mean of the measurement of construct.

**Table-2.** The Level of Entrepreneurial Mindset of Respondents (n=1000)

Level	Amount	Percentage	Mean	SD
			3.5972	.58854
Low (1.00-2.33)	15	1.5		
Average (2.34-3.66)	503	50.3		
High (3.67-5.00)	482	48.2		

**Table 3** illustrates the descriptive distribution of every item that measures the entrepreneurial mindset of respondents. This study found that there are four items with high level of mean score regarding to the entrepreneurial mindset of respondents. The highest score [M=3.72] is shown on the item “*I am enthusiastic in thinking about new ideas regarding business opportunities.*”. It is followed by the item “*I have my own way in handling certain situation.*” [M=3.71]; “*I sometimes think about certain products that are saleable.*” [M=3.70]; and “*I collect and analyse information by thinking logically.*” [M=3.69]. Meanwhile, the other eight items display the average level mean score of entrepreneurial mindset.

**Table-3.** The Mean Distribution and Standard Deviation of Entrepreneurial Mindset of The Respondents (n=1000)

No.	Item	Mean	SD
1.	I like to search for ideas that can be converted into business opportunities.	3.61	.864
2.	I analyse the benefits from the identified business opportunities.	.346	.840
3.	I am enthusiastic in thinking about new ideas regarding business opportunities.	3.72	.875
4.	I analyse how certain entrepreneurs can succeed.	3.62	.945
5.	I sometimes think about certain products that are saleable.	3.70	.920
6.	I can react creatively in difficult situations.	3.35	.864
7.	I have my own way in handling certain situations.	3.71	.854
8.	I collect and analyse information by thinking logically.	3.69	.863
9.	I conclude something based on data and facts.	3.62	.843
10.	I have an organised plan for my future career.	3.60	.900
11.	I think that there are still many local products that have not been	3.53	.954

	marketed.		
12.	I sometimes think about how to solve the inefficiency of a particular business in the market.	3.58	.927

Independent t-Test is used to see whether there is any significant difference on the entrepreneurial mindset between the respondents of certificate and diploma level. The analysis found significant difference in terms of the entrepreneurial mindset of respondents in certificate level [ $M=3.5195$ ,  $SP=.59594$ ] and the respondents in diploma level [ $M=3.6683$ ,  $SP=.57308$ ;  $t(1000) = -4.022$ ;  $p=.000$ ], where diploma level respondents have higher entrepreneurial mindset compared to the certificate level respondents. The analysis also reveals a significant difference in the entrepreneurial mindset of respondents with entrepreneur family/parents [ $M=3.6986$ ,  $SP=.60115$ ] and those with non-entrepreneur family/parents [ $M=3.5334$ ,  $SP=.57180$ ;  $t(1000) = 4.361$ ;  $p=.000$ ], and also a significant difference between respondents involved in entrepreneurial activities [ $M=3.7639$ ,  $SP=.56752$ ] with those not involved in entrepreneurial activities [ $M=3.4602$ ,  $SP=.57036$ ;  $t(1000) = 8.395$ ;  $p=.000$ ]. In other words, the study shows that the respondents with entrepreneur family/parents possess higher entrepreneurial mindset abilities compared to those without entrepreneur family/parents background. As expected, the study also shows that the respondent who participated in entrepreneurial activities while studying have more entrepreneurial mindset compared to those who never participated in them.

**Table-4.** The Difference in Entrepreneurial Mindset based on Selected Profile (n=1000)

Profile	n	Mean	SD	t	p
Level of education				-4.022	.000
	Certificate	478	3.5195	.59594	
	Diploma	522	3.6683	.57308	
Family/Parents				4.361	.000
	In business	386	3.6986	.60115	
	Not in business	614	3.5334	.57180	
Involved in business					
	Yes	451	3.7639	.56752	8.395
	No	549	3.4602	.57036	

Current research shows that the TVET students in Malaysia especially those in Polytechnic and Community Colleges involved in this study have a moderate level of entrepreneurial mindset. It contradicts with a study by [Nurazlinda and Suaiza \(2017\)](#) which found that TVET students possess high entrepreneurial characteristics in terms of business management, financial management, identification of existing business opportunity and self ability in venturing into entrepreneurial field after graduation. However, their study is limited to only the students of Mechanical Engineering Department of a selected polytechnic and only among students who have attended entrepreneurial course. The background of respondents in the research of [Nurazlinda and Suaiza \(2017\)](#) is quite different with the current study, where the data shows that the majority of respondents state that they have not attended any entrepreneurial course organised by their institution or the outsiders.

Subsequently, a research by [Puspawati \(2013\)](#) who examines the inclination of final year TVET students of five south zone ILTJM to venture into the entrepreneurial field reveals that the respondents have high entrepreneurial characteristics. Among the entrepreneurial characteristics measured in this study are self confident, able to spot and seize opportunities, persistent, creative and innovative, enjoy challenges and willing to take risks. These findings of [Puspawati \(2013\)](#) are also different from the current research which shows the average entrepreneurial mindset level of Polytechnic and Community College TVET students as one of the important entrepreneurial characteristics. The measured variables in both studies are seen as almost similar. Indeed, the current research and the study of [Puspawati \(2013\)](#) involved the TVET students sample. However, the difference of findings may be due to the difference in field of expertise of the students sample in both studies. This difference could also happen possibly because of the difference in the training provider agency of the involved TVET, because it is generally known that the recognition of TVET stream in Malaysian government sector involves various ministries and agencies. In this context, current research sample is among the Polytechnic and Community College students who are under the supervision of Ministry of Education Malaysia while ILJTM is supervised by the Ministry of Human Resources Malaysia. Clearly, previous studies have indeed found a huge potential of entrepreneurship among Malaysian students. However, their level of inclination towards the entrepreneurial field is seen as different ([Wan et al., 2016](#)).

The current study also shows the difference in the level of entrepreneurial mindset involving at least three selected profiles which are level of education, family/parents background and student involvement in business. Current study shows that students with higher level of education (diploma) have higher entrepreneurial mindset ability than those with lower level of education (certificate). This finding is slightly contrasting to the research of [Zaidatol et al. \(2002\)](#) for it shows that high-achieving students have lower entrepreneurial potential than the low-achieving students. However, their research sample involves form four students of academic secondary schools in the whole country with 85% of student involvements from art stream and the rest (15%) from science stream.

The current study also shows that students with background of family/parents who are in business have higher entrepreneurial mindset abilities than those with different family/parents background. A strong correlation between the family/parents background and the context of entrepreneurial mindset in this study is seen as parallel with some previous studies (Buerah *et al.*, 2011; Eriniwati, 2014; Norashidah *et al.*, 2009; Zaidatol and Hisyamuddin, 2009). Buerah *et al.* (2011) emphasizes that role model has a connection with the intention of an individual in venturing into entrepreneurial field, where early exposure and family involvement in entrepreneurship affect the children's inclination (mentality) towards entrepreneurial mentality.

As expected, current research shows that students involved with entrepreneurial activities are seen to have higher entrepreneurial mindset abilities than those who are not. In his study on some final year students of one MARA Professional College, Mohd *et al.* (2013) recommends the students to be given the opportunity to apply their entrepreneurial skills at their learning center. This is because his research found that motivation factor is one of the factors that influence the inclination of students to become entrepreneurs. Similarly, with the current study context, the entrepreneurial mindset of TVET students is seen to have the potential to expand if they are given the opportunity to run a business while they are studying. Dweck (2006) believes that one's thinking can be improved or, in other words, it is growth oriented. According to her, although a person's mind only assumes a fixed set of talents and abilities, the growth of the mind has the potential to rapidly develop one's talent and ability.

## 6. Conclusion

In short, TVET students in Malaysia indeed possess entrepreneurial mindset abilities although the level of them varies as shown in this study and previous studies. This shows great potential for the country to produce as many generations of job creators as possible among the TVET students. It is generally known that entrepreneurial field is seen as the best mechanism in reducing unemployment rate among HEI graduates other than reducing the pressure on the existing labour market with a role towards increasing the labour market opportunity of the country. Furthermore, the challenge of Industry 4.0 is seen to have multiple effects when the emphasis on the Internet of Things (IoT) or the construction of virtual reality technology is slowly taking over the labour intensive in the job market. This is indeed a major challenge for the HEIs that are seen to be in the role of producing human capital to occupy the employments in the development sector of the country in the future. Therefore, integrated effort should be made, particularly at the level of the Ministry of Education Malaysia in this context to ensure the success of the Higher Education Institution (HEI) Entrepreneurship Action Plan of 2016-2020 which targets 100% of HEI students to be exposed to entrepreneurial values and attributes by 2020. To ensure success of Initiative: Implementing the Job Generator Framework or the Job Creator Framework, which is under the Learning System Support Strengthening Strategy, the Ministry also targets 5% of the overall number of HEI graduates who are self-employed or are making entrepreneurship as their choice of career by 2020. The Ministry's previous record shows that the number of HEI graduates who venture into entrepreneurial field after completing their studies is a very small percentage of only around 2% of the total number of graduates each year. Hence, strategies and action plans need to be streamlined by involving all important stakeholders so that entrepreneurial mindset among TVET students in Malaysia truly embodies the new entrepreneurial talent of the nation in the future.

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