The Readiness of Vocational College Technical Students for Job Employability

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***Abstract*— Readiness to engage in careers is an issue that is often faced by Malaysian students. Unemployed graduates continue to be a growing problem in Malaysia. Some employers consider academic competence alone is inadequate and begin to urge higher education institutions producing graduates equipped with technical skills. In general, this study aimed to identify the level of readiness of technical students for job employability at six vocational colleges in Johor. The population of this study was final year technical students at six vocational colleges in Johor. There were 300 respondents selected as the sample, using the formula by Krejcie and Morgan. A questionnaire was utilised as the instrument of this study with reliability alpha value of α = .720. Data were analysed using SPSS 22.0 software. Descriptive analysis in the form of scores was used to see whether students were equipped with job employability skills. The students' level of readiness was 4.33 for their knowledge, 4.32 for skills and 4.31 for attitude. Therefore, it can be concluded that technical students are ready to enter the world of work.**

***Keywords*— Readiness, Job Employability**

I. INTRODUCTION

Vocational education is increasingly essential in an era of economic and social development of the country. Developing countries require the professional and semi-professional workforce to ensure sustainable development of the country. They are significant assets that plan the core of a country's development (Yusof & Rajuddin, 2012). Therefore, the opportunity to further study and enter the broad job market is widely opened to vocational students. Many employers are willing to employ vocational students to seize employment opportunities in this country. This is evident by the statement of Yasin (2010) that the technology and industrial sectors are targeting to provide 92,545 job opportunities in 2012 compared to 73,784 job opportunities in the previous year. It shows that year-over-year employment increases and indicates that vocational school graduates are needed to fill the country's labour market demands.

Amin and Ripin (2010) believed that employers agree technical and vocational education can help provide skilled and semi-skilled workers in realising Vision 2020. The chance to further their studies and enter the job market is opened wide to vocational students. The 11th Malaysia Plan (RMK-11) validation studies were conducted to graduates from public TVET institutions found that the average rate for the employability within six months after graduation is between 70% and 80%. This shows that graduates from vocational colleges are needed to meet the requirements of the national labour market. The education sector plays a significant role in developing human capital with a strong identity, competent, noble, knowledgeable and highly skilled to meet the needs of the country in response to the challenges outlined in Vision 2020 (Ahmad Badawi, 2010).

There are two perspectives associated with vocational education. The first is employment-based and school-based vocational education (Yusof & Rajiuddin, 2012). In fact, the existence of various streams in the technical and vocational education system can provide students with skills and knowledge in preparation for the world of work. Therefore, technical and vocational education (TVE), particularly vocational, has a great responsibility to build a highly-skilled, capable and educated workforce in helping the country achieve a developed nation status. Vocational education includes courses such as automotive, building, electrical, electronics, welding and metal fabrication, technology, and engineering workshop practice, industry machining technology, refrigeration and air conditioning (Ministry of Education, 2008).

The first aim of establishing KV has been clearly stated by the Malaysian Ministry of Education to produce vocational education graduates with certificates or diplomas recognised by certification bodies, industry and government. The second aim is to produce vocational education graduates who can pursue higher education or training at higher levels, while the third is to produce a vocational education graduate who is an entrepreneur. The fourth aim is to produce lower secondary education graduates with certificates recognised by national and government certification bodies and finally, to strengthen the Ministry of Education's delivery system by implementing vocational education transformations (Malaysia Ministry of Education, 2010).

Preparing for graduation before facing careers life is an important aspect that is needed by the organisation and industry. Adequate mental and physical readiness can prevent graduates from experiencing cultural shock as they enter the workforce (Arsat & Rasid, 2010). Readiness includes skills in performing work activities, readiness to accept work environment, physical condition and overall confidence in the work itself. According to Amin and Ripin (2010), the lack of self-preparation among students led to them having to wait longer in finding the right job. Among the factors that often influence students' readiness to enter the career path are their skills, knowledge and attitude (Ahmad Zanzali & Rahmat,

2010). The problems related to career readiness should be emphasised to avoid it from becoming a chronic issue in the world of education, and ultimately keep the status of higher education institutions as an institution that is recognised worldwide.

II.BACKGROUND OF PROBLEM

The fast-growing industry has created fierce competition for employment among vocational college students in Malaysian higher education institutions. It causes the unemployment rate among the graduates higher. The unemployment rate rises as the number of vocational colleges increase with the increase in applications for vocational colleges (reaching 117,000 applications). This situation is happening due to the opening of more vocational colleges to welcome more intakes as the current capacity can only accommodate 21,000 students (Yassin, 2013).

In addition, Dickinson (2009) argued that there is a gap between employers' skills for graduates to work in the industry. RoomaiNor (2012) stated that technical and vocational education is having difficulty competing with current technologies. This is because employers have problems in implementing the latest technology in the workplace because many workers lack the knowledge and skills to learn new technology to gain new experiences. Moreover, according to Nasir (2013), the problems faced by students is associated with indecision, lack of information about themselves and career, there is no certainty about their career choice, the less interest to design and unable to solve the problem.

According to Arsat and Rasid (2010), the work environment influences the readiness of students to enter the technical field because they think that working in technical field will engage them in heavy and dirty work and use a variety of heavy machinery and machines, making it difficult especially for female students (Scher, 2000). Therefore, there were three levels of readiness that researchers were concerned about students on whether they are willing to quit. The levels of readiness were the knowledge, skills and attitude of the final year technical students who graduated in 2017 and then worked in the industry in their field of study.

The objectives of the research are as follows:

1) Identify the level of readiness of technical students from vocational colleges for job employability in terms of knowledge.
2) Identify the level of readiness of technical students from vocational colleges for job employability in terms of skills.
3) Identify the level of readiness of technical students from vocational colleges for job employability in terms of attitude.

III. RESEARCH METHODOLOGY

This study was a survey study and used a quantitative approach via a questionnaire conducted on final year technical students of vocational colleges.

A. Population and Sample

The chosen population of the study was the vocational colleges around Johor. The respondents were 300 final year technical students from vocational colleges around Johor using the formula by Krejcie and Morgan (1970). In this study, the researchers used cluster random sampling and divided the area in which the study was conducted.

B. Research Instrument

TABLE 1 QUESTIONNAIRE ITEMS

Section	Item	Numbers of Item
Section A : Demographic of respondents	Race, gender, the field of study and vocational college location.	4 items
Section B : Items related to student readiness in terms of knowledge	This section examined aspects of knowledge that include theoretical learning for practical work.	20 items
Section C : Items related to student readiness in terms of skill	This section examined aspects of skills that include methods, procedures and techniques.	14 items
Section D : Items related to student readiness in terms of attitude	This section examined aspects of attitude that include student preparation as an employee.	17 items

The research instrument used to collect data from respondents in this study was a questionnaire. Using this questionnaire improved the accuracy of data obtained from the respondents as they were not affected by the researcher. The questionnaire was constructed via self-assessment by referring to previous studies. The questionnaire was divided into four sections.

IV.FINDINGS AND DISCUSSION

The results from the questionnaire were analysed to determine the readiness of final year technical students from vocational colleges for job employability. 300 sets of questionnaire were distributed at six vocational colleges around Johor. The overall data collected were analysed descriptively using SPSS Version 22.0 software by calculating mean scores to answer all three research objectives.

A. The Level of Readiness of Technical Students from Vocational Colleges for Job Employability in terms of Knowledge

TABLE II

DISTRIBUTION OF MEAN SCORES AND STANDARD DEVIATIONS FOR KNOWLEDGE ASPECTS

No.	Item	Mean score	Std dev.	Level
1	I have theoretical knowledge in the field I follow.	4.38	0.724	High
2	I was able to identify the name of the tool needed in the workshop.	4.30	0.743	High
3	I can explain the working procedure well.	4.29	0.748	High
4	I have knowledge of every aspect of safety at the workshops.	4.35	0.731	High
5	I can list the names of the machines I used in the workshop.	4.32	0.740	High
6	I can explain every function of the equipment in the workshop.	4.34	0.735	High
7	I can explain every function of the machine in the workshop.	4.34	0.725	High
8	I can identify the equipment needed to carry out practical work.	4.31	0.727	High
9	I can identify the machines needed to perform practical work.	4.33	0.693	High
10	I can identify the materials needed to carry out the work.	4.37	0.743	High
11	I can describe the use of materials required in practical work based on the field that I follow.	4.32	0.734	High
12	I am always prepared to sit for the theory test in the field I follow.	4.33	0.728	High
13	I am constantly developing theoretical knowledge in the field that I follow through the internet	4.30	0.742	High
14	I constantly develop theoretical knowledge in the areas I follow through reading books.	4.31	0.727	High
15	I will better understand the teaching of theory after practical work.	4.30	0.752	High
16	I always receive the latest information about equipment from lecturers during the teaching and learning process.	4.37	0.717	High
17	I always receive the latest information about machines from lecturers during the teaching and learning process.	4.36	0.724	High
18	I am always up to date on equipment by browsing the internet.	4.33	0.738	High
19	I keep up-to-date with machine news through the internet.	4.28	0.743	High
20	I have knowledge of safety in the event of a crash in the workshop.	4.35	0.733	High
Sum of Average Mean		4.33	0.135	High

There were 20 items related to the level of readiness of technical students from vocational colleges for job employability in terms of knowledge. Table 2 shows that final year students had a high level of knowledge with an average mean score of 4.33. Students had theoretical knowledge in the field followed had the highest mean score (4.38). Besides, students knew of every aspect of safety at the workshop and knowledge of safety in the event of an accident at the workshop was the second highest with a mean score of 4.35. However, keeping up to date on the machine by browsing the internet had the lowest mean score (4.28).

The level of readiness of technical students from vocational colleges for job employability in terms of knowledge in this study was high. Technical and vocational education (TVE) is educating and training individuals to develop specialised knowledge and skills to enhance their work productively and effectively. This shows that TVE knowledge and skills are necessary to produce competent students in all aspects. According to Minghat and Sikh Mohamad (2010), the knowledge that students have in the field of study has a positive impact on the practical work done. Knowledge is very important to an individual and is an asset that put a person at a higher level than others.

Students also have a high level of knowledge on the safety aspects in the workshop as they are exposed to it. Knowledge of safety aspects is important to avoid accidents or injuries while doing practical work in the workshop. Furthermore, it also aims to simplify tasks and to prevent accidents from happening (Bahari, 2009). This ensures students to be more aware of the safety aspects in workshops as they are often exposed to dangerous threats while doing practical work.

B. The Level of Readiness of Technical Students from Vocational Colleges for Job Employability in terms of Skills

TABLE III

DISTRIBUTION OF MEAN SCORES AND STANDARD DEVIATIONS FOR SKILLS ASPECTS

No.	Items	Mean score	Std Dev.	Lvl
21	I am conversant with all the equipment in the workshop.	4.36	0.729	High
22	I am good at handling the machine that is in the workshop.	4.34	0.756	High
23	I am skilled in handling mobile machines available in the workshop.	4.36	0.726	High
24	I am good at doing homework based on assignments given by lecturers.	4.35	0.727	High
25	I can do my homework using the right tools.	4.35	0.749	High
26	I can do my homework by using the right machine.	4.35	0.737	High
27	I am always ready for the competency test that the lecturer will conduct at any time.	4.32	0.765	High

28	I am good at following the practical steps I have taken in the workshop.	4.30	0.753	High
29	I was able to do my homework using equipment without the help of my teachers and friends.	4.33	0.741	High
30	I was able to do my homework using the machine without the help of my teachers and friends.	4.24	0.756	High
31	I am trying to get the SKM on a higher level.	4.32	0.734	High
32	I can detect damage to equipment at the workshop while using it.	4.33	0.753	High
33	I can detect damage to the machine at the workshop while using it.	4.32	0.765	High
34	I have skills in safety in case of accidents in the workshop.	4.26	0.753	High
Sum of Average Mean		4.32	0.162	High

There were 14 questions asked to find out the level of readiness of technical students from vocational colleges for job employability in terms of skill. The results in Table 3 show that the final year students had a high level of skills with an overall mean score of 4.32. The results showed that students who used all the equipment and operating the mobile machines in the workshop had the highest mean scores (4.36). Meanwhile, students mastered the practical steps they had taken in the workshop had a mean score of 4.30. On the other hand, proficient students did their practical work without the help of teachers and peers (mean score = 4.24).

The level of readiness among technical students from vocational colleges for job employability in terms of skill was high. This is in line with the vocational college curriculum, which covers 70% on practical skills and 30% on theory-based academics (Ministry of Education Malaysia, 2010). In this area of expertise, students need to be trained in using and operating equipment and machines in vocational college work. Early exposure to students on the use of machine tools and machinery make students well-versed in handling the equipment efficiently and correctly.

Besides, testing is required to evaluate one's skills. The skills in operating the equipment and machinery in the workshop can be tested and evaluated by doing competency testing. Sampson and Fytos (2008) stated that the competency level is an important factor in assessing job ability. With the competency exam, students will be able to upgrade their skills from time to time.

C. The Level of Readiness of Technical Students from Vocational Colleges for Job Employability in terms of Attitude

TABLE IV

DISTRIBUTION OF MEAN SCORES AND STANDARD DEVIATIONS FOR ATTITUDE ASPECTS

No.	Item	Mean score	Std dev.	Level
35	I will be back late if work is not done.	4.27	0.757	High
36	I am willing to work overtime.	4.26	0.735	High
37	I am willing to accept all the assignments that the lecturers give me.	4.29	0.744	High
38	I do not like to waste time to complete the work.	4.30	0.726	High
39	I am ready to hear the lecturer's instructions while working on the workshop.	4.29	0.732	High
40	I always follow the rules at the workshop.	4.32	0.712	High
41	I plan first before starting a job.	4.31	0.723	High
42	I am ready to fulfil all the duties assigned by the lecturers.	4.28	0.724	High
43	I still think positively even though burdened with many tasks.	4.31	0.707	High
44	I will complete all assigned tasks on time.	4.35	0.722	High
45	I will ask experienced people about things that i do not understand.	4.31	0.726	High
46	I love to learn something new, although not my field to add experience.	4.33	0.728	High
47	I am willing to take the course to improve my knowledge in the field I follow.	4.33	0.718	High
48	I am willing to take courses to improve my skills in the field I follow.	4.33	0.714	High
49	I always get excited when I do assignments assigned by lecturers.	4.33	0.733	High
50	I have initiative to increase knowledge in the field.	4.37	0.708	High
51	I have initiative to improve skills in the field.	4.34	0.725	High
Sum of Average Mean		4.31	0.130	High

There were 17 items related to the level of readiness asked to technical students from vocational colleges for job employability in terms of attitude. Table 3 shows that the overall mean score was 4.31. The highest mean score was 4.37, in which students had the initiative to increase their knowledge in the field. Besides, students consistently adhered to the rules in the workshop had the second highest mean score (4.32). Whereas, students were willing to work longer had the lowest mean score (4.26).

The level of readiness of technical students from vocational colleges for job employability in terms of attitude was high. Attitude is an important element for an individual to achieve

success, especially for students who are going out for work. Studies conducted by Kamro (2012), and Arsat and Rasid (2010) found that attitude and interests can influence students' willingness to do things, especially in performing practical tasks that require the use of hand tools and machine tools. Great interest can help increase a person's confidence to succeed and be the catalyst for the individual to work in that field of interest.

Students have the initiative to enhance their knowledge and skills in their field of study, which indicates that high interest enables students to acquire good knowledge and skills. Attitude plays a significant role in enforcing safety regulations at workshops and workplaces. Students with a good attitude will always adhere to workplace or workshops safety rules (Hassan, 2012) as it is obligatory to ensure that accidents do not occur.

V. CONCLUSION

In general, knowledge aspects are the knowledge acquired through hands-on experiences, while the technical skills aspects are hands-on teaching which consists of methods, procedures and techniques, and the attitude aspects refer to the student's self-preparation as an employee.

According to the Education Development Plan 2013 – 2025, vocational education provides students with careers that require specialised technical expertise. The career choices can revolve around the technical and vocational skills from various aspects of work at workshops to positions in engineering and other occupations. In contrast to the technical flow that prepares students to pursue higher education, vocational flows are more career-oriented. As such, knowledge, skills and attitude are very important for students going out to work in the industry as these three aspects are intertwined with each other to produce a high-quality workforce for the industry.

The findings of this study for the level of readiness of final year technical students from vocational colleges working towards the employability in terms of knowledge, skills and attitude are high. Thus, it can be concluded that the final year students are ready to step into the world of work. Therefore, the researchers hope that the results of the study will be used to help graduates and institutions improve the quality and enhance students' skills in line with employers and national needs.

VI. RECOMMENDATION

Some recommendations need to be considered by the parties involved. Firstly, it is recommended that those responsible for the vocational college students to help them equipped with good technical skills, high level of knowledge and a positive attitude to make themselves competitive in the labour market.

In addition, the vocational colleges can also provide a brief talk by calling experts in the field of technical skill and employability to share their knowledge with the students. Indirectly, this initiative can open up many opportunities for students to ask questions or to listen to opinions in improving their knowledge, skills and attitude to become an all-rounded employee and favoured by employers.

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