Leadership and Management Skills among Master in Technical and Vocational Education Students to Fulfill Employer Demand

Adib Farhan Bin Zaime¹, Norfazillah Jesey Taki²
¹,² Faculty of Technical & Vocational Education, University of Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, Malaysia

Abstract: Graduate unemployment problem exists with the problem of vacancies in the industry. One of these problems occurred because lack of generic skills among graduates. Hence, this study was conducted to determine the level of students' generic skills before stepping into the working world. This study used a survey method that involves 57 students from the Faculty of Technical and Vocational Education. A quantitative study is conducted by using a questionnaire. Data collected and analyzed using the Statistical Package for Social Science (SPSS) 21.0 for Windows. The results showed that, the student mastered the generic skills. In determining the difference in the level of generic skills of engineering and non-engineering student T test was used. Results showed a no significant difference between the levels of students' generic skills. Finally, these findings can know the level of generic skills of students in producing competent graduates.

Keywords: Generic skills, Unemployment, Leadership, Management.

1. Introduction

Generic skills or soft skills is a familiar and always dealt with both of the institutions or the industry. According to Kearns P. (2001), generic skills are skills that can be applied in a variety of different jobs. Generic skills is a necessity in order to function effectively at a minimum rate when doing work on specific skills that are owned and generic skills developed through natural processes such as growth, maturation and aging (Zakaria M. M. A. Z. et al., 2007). Generic skills are necessary skills for the graduates and not just focus on the things they learned in their field but including communication, problem solving, working in groups and generic skills is also the intellectual power and imagination as well as involving personal and interpersonal skills (Nasir P., 2008).

According to Arsat M. & Rahimi S. D. (2008), generic skills are very important and should be taken seriously as an individual who has good technical skills and without having generic skills, they will be considered of poor quality. According Mohamad B. (2011), the generic skills needed in human resource management such as recruitment, promotion, salary increase, placement and training. In addition, it allows graduates play a more effective role in the world of work.

Therefore, generic skills or human capital is an additional element that should be owned by every graduate. With generic skills makes a student can not only adapt to the changes and developments in the sector of employment even in the face of everyday life (Mustafa M. Z. et al., 2008). Generic skills also serve to assist in the face of rapid technological change and continuous.

2. Literature Review

Having a career as a graduate graduating from a higher learning is one dimension of graduates (Ahmad S. et al., 2011). Educational programs such as technical and vocational education actively encouraged by higher education institutions to meet the needs of trainers, particularly in vocational colleges, community colleges and polytechnics, colleges and private skills throughout Malaysia. In line with the development of a thriving industry in Malaysia, engineering program is becoming one of the preferred choices for students in their field of study following high level. Engineering program is able to provide an efficient workforce of highly skilled and have become important and more challenging than the industry. In line with the industrial development in Malaysia which is growing rapidly, countries basically requires competent staff who have the ability to apply the concepts of technology, improve equipment and systems, optimal operation and maintenance of equipment, plant systems and structures to align with labor in the countries developed countries. In order to produce this kind of labor, it is important to have educational organization skilled trainers not only in education but were able to instill leadership and good management. This is because trainers not only educate but helps to administer educational institutions involved in order to achieve the vision and mission of the educational institutions.

With the shift in the focus of our economy in the fields of engineering, manpower needs have also changed. So, there is more emphasis on technical knowledge and generic skills. Most jobs today require not only knowledge but also require generic skills, wisdom and maturity (Krish P. et al., 2011). The key issue in the economic development of a country is the employment and unemployment rates. A country is said to have sustainable growth if unemployment is low. Conversely, if the unemployment rate is high, meaning the occurrence of wastage of human resources (Yussof I. et al., 2008). The problem of unemployment continues to be one of the most important economic issue and should be handled in the job market. Unemployment for graduates of this
education happens after the government gave the opportunity for untrained temporary teachers throughout the country to get a diploma in education and so absorbed in as civil servants. This becomes even more critical when the government decided to extend the period of retirement for senior teachers from 58 years to 60 years. Because of this, education graduates who graduated did not have a chance to go anywhere because of the opportunity they seem to have been filled by the existing workforce. According Mohamad A. et al. (2007), the phenomenon of unemployment in Malaysia among others due to the dumping of highly qualified labor force. It is worrying because Malaysia requires a skilled workforce and educated to meet the needs of industry, and thus produce excellent human capital. The issue of unemployment is a global problem. In many developing countries like the Philippines, Indonesia, India, and developed countries such as Britain and the United States, the issue of unemployment among graduates also suffered. Clearly, the employability of graduates in dealing with various competitive market, both in terms of academic quality, skills, training, skills and so on increasingly urgent.

According to a study by the National Economic Action Council (NEAC, 2001), there are several causes of unemployment among graduates, among others, is the lack of training in preparation for entering the career, the lack of quality and usability of energy graduates and graduates the skills shortage in certain aspects such as management language the second presentation skills. On the other hand, employers emphasize generic skills such as motivation, self-adaptive skilled, skilled and adept finished communicate problems, other special skills.

Generic skills are an added value to the students when they graduate. In addition to academic excellence, these generic skills can help students or graduates in finding employment. With the availability of generic skills in their individual self is said to be capable in the various aspects of domain placed on generic skills. According Abidin Z. F. I. (2011), in determining sustainable development, generic skills needed to address the economic, environmental and social change supported by Series & Mustapha R. (2011), which states that environmental factors also influence the level of learning students’ generic skills. According to Abdullah N. C. & Daud T. T. (2008), confidence in the abilities and capabilities of the students can be formed with generic skills from an early stage. The findings Akma N. & Ismail A. (2013), found that generic skills in the Practical Training Program Non-Muslim propaganda among students can foster student self in the face of organizational management and adjustment in society. Also supported by Esa A. et al. (2005a), generic skills can help students develop their potential In a study by Mustafa M. Z. et al. (2008), the requirements of the industry today not only in academic achievement but also non-technical skills considered essential soft skills modules and implementation in higher education institutions to some extent give students an understanding of their importance. Zulkifli N. & Kassim M. S. S. (2008), the public now so many well-educated with their non-technical skills and technical skills will be able to produce graduates who are required by the job market now. To produce graduates who are able to face the challenges in the working world and can contribute to self, family, community and country, the combined efforts of all parties, it is highly desirable (Zulkifli N. & Kassim M. S. S., 2008).

In 1964 the PTV in Malaysia has been introduced under the Department of Engineering Management and is now known as the Technical Management Division (BPTV). The main purpose of PTV introduced to provide human resources in developing economies in the industrial field (Dason A. et al., 2011). According to Razzaq A. A. R. (2008), "PTV put towards training the basic concept of a person to engage in employment through the application of skills and knowledge and to foster character development and character to add the ability to understand, evaluate, expression and to adapt to the constantly changing environment" (pg.156). Produce citizens who are skilled and have the appropriate level of education is one of the objectives of the PTV. Economic growth is dependent on labor supply of educated, skilled, skilled and highly motivated. Increased industrial growth is dependent on the characteristics and skills that can be a source of labor productivity and high competitiveness. The resulting labor supply should be relevant and in line with industry requirements (Razzaq A. A. R. et al., 2008). In the production workforce of skilled and knowledgeable, PTV has the responsibility lay. Among PTV which was introduced in Malaysia such as the Technical School, Vocational College, Community Colleges and Polytechnics. Next, in the next sub-chapter study focuses more on the polytechnic as a main scope of this study.

Past studies on generic skills have many issues to discuss the issue of generic skills among students. Among the main issues contained in the element of generic skills such as problem based on previous studies in communication skills, teamwork skills, problem solving skills, leadership skills, management skills, learning skills, technology skills and information management and entrepreneurial skills. In addition, elements of generic skills are also among the elements required by the industry in selecting prospective employees. In the next sub-topics will be explained in more detail about the elements of generic skills have been studied leadership skills and management skills.

3. Methodology

In this study, sample selection made in purpose. The study population is students of University of Tun Hussein Onn Malaysia (UTHM). Selection of students from the Master of Technical and Vocational Education whom ever do teaching practice Purposive sampling involves selecting samples can be sampled by the researchers as representative of the population studied. In this study, researchers will study a group of subjects who chooses which of the Masters in Technical and Vocational Education (Singh P. et al., 2010).

Table 3.1 shows the breakdown of the sample:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Master Students of Technical and Vocational Education Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTHM</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>57</td>
</tr>
</tbody>
</table>

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Table 3.1 shows the student population Masters in Technical and Vocational Education 57 students.

This study focused on of UTHM, Parit Raja. of UTHM student selection is based on Technical and Vocational Education Masters who have undergone training in teaching the target of this research.

The questionnaire used was adapted from Tuah K. H. & Hyang T. K. (2008), who conducted a study on the development of generic skills profile of the graduates of hospitality. Referring to the questionnaire were made, the validity of the results is an indication that all items have a high correlation between item value exceeding 0.30 and indigo alfa very good reliability between 0.821 to 0.980. For evaluation questionnaire on the level of students' generic skills of researchers focusing two main aspects of leadership and management skills. Data from the questionnaires were analyzed using the Statistical Package for Social Science (SPSS) 21.0 for Windows.

Table 3.2 shows the methods used by the researchers for data analysis methods.

<table>
<thead>
<tr>
<th>Table 3.2: Methods of Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Questions</td>
</tr>
<tr>
<td>What level of student leadership skills Technical and Vocational Education Degree?</td>
</tr>
<tr>
<td>What level of management skills of students in Technical and Vocational Education Degree?</td>
</tr>
<tr>
<td>Is there a difference between the level of students' generic skills of engineering and non-engineering?</td>
</tr>
</tbody>
</table>

Based on Table 3.2, the first and second research question used to know the level of leadership and management skills of students. For the third research question is used to examine the differences in terms of skill level background of the respondents.

4. Data Analysis and Finding

Based on Table 4.1, data in Part A consists of respondents’ background. Generally, there are only two groups of respondents, namely which are from the field of engineering and non-engineering.

Table 4.1: Frequency and Percentage of Respondents by Area

<table>
<thead>
<tr>
<th>Number</th>
<th>Field</th>
<th>Total</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Engineering</td>
<td>30</td>
<td>52.6</td>
</tr>
<tr>
<td>2.</td>
<td>Non-engineering</td>
<td>27</td>
<td>47.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>57</td>
<td>100</td>
</tr>
</tbody>
</table>

Total number of respondents involved is 57. Number of respondents from the field of engineering is the majority (52.6%) compared to respondents from non-engineering fields with only 27 (47.4%).

Analysis Part B of this study will answer the question one and two covering the first objective of the study, namely:

a) What level of leadership skills among students of final year graduates technical and vocational education, of UTHM?

b) Is the level of management skills among students of final year graduates technical and vocational education, of UTHM?

c) The findings obtained, the overall mean score for each domain of generic skills that have been studied have been identified.

Table 4.2: Overall Mean Scores Domain Generic Skills to Assess

<table>
<thead>
<tr>
<th>Domain Generic Skills</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Leadership Skills</td>
<td>4.25</td>
</tr>
<tr>
<td>Management Skills</td>
<td>4.30</td>
</tr>
</tbody>
</table>

In domain generic skills in Table 4.2, it is found that domain management skills highest recorded 4.30 min (standard deviation = 0.316). While the leadership skills to score mean = 4.25, standard deviation = 0.351.

For domain leadership skills leadership skills, there are 10 items that have been analyzed and presented in Table 4.3.

Table 4.3: Ranking Elements Based Leadership Skills Skill Level Students

<table>
<thead>
<tr>
<th>Leadership Skills</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>I have to be fair to all parties.</td>
<td>4.57</td>
</tr>
<tr>
<td>I can look after their welfare.</td>
<td>4.5</td>
</tr>
<tr>
<td>I am willing to work overtime.</td>
<td>4.42</td>
</tr>
<tr>
<td>I can motivate members.</td>
<td>4.08</td>
</tr>
<tr>
<td>I can lead the project.</td>
<td>4.14</td>
</tr>
<tr>
<td>I can influence others.</td>
<td>4.14</td>
</tr>
<tr>
<td>I was able to conduct the meeting</td>
<td>4.14</td>
</tr>
<tr>
<td>I firmly command.</td>
<td>4.1</td>
</tr>
<tr>
<td>I can motivate members.</td>
<td>4.08</td>
</tr>
<tr>
<td>I can be an example to the members.</td>
<td>4.01</td>
</tr>
<tr>
<td>Overall Total</td>
<td>4.25</td>
</tr>
</tbody>
</table>

Through the Table 4.3, available for students’ perceptions highest mean score is 4.57 (standard deviation = 0.498), which holds that students can be fair to all parties is a matter of very controlled in leadership skills. For the lowest mean score was 4.01 (standard deviation = 0.767), which can be an example to the members. However, this element is dominated by students. For the mean scores of other items in the range 4.50-4.080. Total overall mean score is 4.25 with a standard deviation = 0.351 which is at a high level. This shows that students can master domain leadership skills to meet the job market.

For domain management skills leadership skills, there are 10 items that have been analyzed and it has been shown in Table 4.4.

Table 4.4: Ranking Elements Based Management Skills Skill Level Students

<table>
<thead>
<tr>
<th>Management Skills</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>I manage time efficiently</td>
<td>4.75</td>
</tr>
<tr>
<td>I was able to distribute tasks to</td>
<td>4.57</td>
</tr>
</tbody>
</table>

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Through the test results can be seen through Table 4.6. this question, T Test was used to test the research question. 

```

<table>
<thead>
<tr>
<th>Domain</th>
<th>Engineering</th>
<th>Non-Engineering</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>4.22</td>
<td>4.22</td>
<td>0.575</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>4.03</td>
<td>4.03</td>
<td>0.692</td>
<td></td>
</tr>
<tr>
<td>Overall Total</td>
<td>4.30</td>
<td>4.30</td>
<td>0.316</td>
<td></td>
</tr>
</tbody>
</table>
```

Table 4.6 shows that there are no significant differences between the level of generic skills of engineering and non-engineering students. This is because a significant value obtained for each domain of generic skills in Table 4.6 is 0.067 and 0.065. All of the above is significantly more than significant level of 0.05.

5. Conclusions

The first objective in this study focused on students' generic skills level domain. Discussion on the first objective of this domain includes two generic skills that have been studied through this study.

Leadership skills are skills that ranked second of two generic skills domain studied. These skills can train someone in becoming a leader capable (Warman S. et al., 2008). Through the results of the findings of these skills are at a high level of control. The findings of this study are equivalent to generic skills among technical students in Malaysia where students are mastering leadership skills (Rahman S. et al., 2011). The findings are also supported by Zaime A. F. (2014), Attakorna K. et al. (2013), Mahamod Z. et al. (2012), and Zainal K. et al. (2011) who found that leadership skills among students and graduates is high.

Meanwhile in the study Sulaiman H. & Sapuan N. H. (2008), found that the level of students skill were very dominate. By contrast with the findings by Esa A. et al. (2013b), and Khawari S. M. & Hamzah M. Z. (2012), found that the level of practice leadership skills used by students is simple. Through ten elements contained in the domain of leadership skills, find elements to be fair to all parties on the top level is dominated. According to Razzaq A. A. R. et al. (2008), leadership is viewed from the aspect of direction, support, willing to accept criticism and opinions, tolerance and ready amended from time to time. Attitude as a leader of the caliber needed to apply again to the students in order to assist students in becoming an effective leader in management.

Through the findings obtained, the domain is dominated by student management skills than leadership skills. The finding that the element of time sufficient to manage the highest ranked ahead of the other elements. Results of the study were matched by Farhan A.F. (2014), who is doing research on students in polytechnics. Meanwhile, the results of this study are consistent with findings by Hamzah M. M. I. & Alia R. (2010), Zainal K. et al. (2011), and Idris R. et al. (2009) in which the level of management skills of students is high.

The findings also find elements that are in the last position which can determine the goals of the organization. Management skills can not only be implemented in the field of employment can even implicated in everyday life. For example, in the uncertain direction of future students is necessary to establish whether the objectives to be achieved.

Table 4.5: Kolmogorov-Smirnov Test For Generic Skills Skill Level Domain Engineering and Non-Engineering Students

```

<table>
<thead>
<tr>
<th>Domain</th>
<th>Student</th>
<th>Kolmogorov-Smirnov Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Engineering</td>
<td>.109</td>
</tr>
<tr>
<td></td>
<td>Non Engineering</td>
<td>.111</td>
</tr>
<tr>
<td>Management</td>
<td>Engineering</td>
<td>.098</td>
</tr>
<tr>
<td></td>
<td>Non Engineering</td>
<td>.157</td>
</tr>
</tbody>
</table>
```

Kolmogorov-Smirnov test were used to determine the distribution of data as the number of samples involved is more than 50 respondents. Results of the analysis show that the data for generic skills domain score based on your level of engineering and non-engineering students are normally distributed. Table 4.5 shows that the level of significance for the table are 0.200 and 0.086, higher than the 0.05. This means that the study is normally distributed. Thus, Exam T will be used. Further analysis is to identify whether there is or there is no significant difference based on the research questions. In this analysis, researchers using T as distribution data obtained is normal. Analysis was conducted for the third question which is "Is there a difference between generic skill level engineering and non-engineering students?" To answer this question, T Test was used to test the research question. Through the test results can be seen through Table 4.6.

Table 4.6: Test T Per between Level Domain Generic Skills Generic Skills Student Engineering and Non-Engineering

```

<table>
<thead>
<tr>
<th>Generic Skills Domain</th>
<th>Respondent</th>
<th>Sig. (2-tailed)</th>
<th>t</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Engineering</td>
<td></td>
<td></td>
<td>No Significant</td>
</tr>
</tbody>
</table>
```

Through the Table 4.4, students' perceptions highest mean score was 4.75 (standard deviation = 0.473), which efficiently managing time. For the lowest mean score was 4.03 (standard deviation = 0.731), which can determine the goals of the organization. Both of these elements is a very controlled and dominated by students. For other item mean scores ranged from 4.57 to 4.05. Total overall mean score of 4.30 with a standard deviation = 0.316 which is at a high level. This shows that students can dominate domain management skills needed in the job market.
Overall, the domain of management skills among students at the high level of control. With a high level of control, these skills can be applied by students during the working environment as it relates to the process of directing, coordinating or monitoring the work of others or yourself (Lu Y. W. 1999).

The second objective in this study focused on the comparison between the level of generic skills of engineering and non-engineering students. Discussions on these two objectives include comparison of the two domains of generic skills that have been studied through the perspective of students.

Based on our studies, the researchers wanted to know whether there is a difference between the level of generic skills of engineering students with non-engineering through two generic skills domain studied. Through the findings obtained by statistically no significant difference between the skill level of the student.

Furthermore, these findings are consistent with studies on issues and problems of graduates unemployed graduates in the job market is a phenomenon caused by the interaction between educational opportunities in educational institutions and jobs. Ahmad S. et al. (2011), on the one hand, institutions need to be dynamic to be relevant to the job market. On the other hand, the industry emphasizes generic skills such as motivation, self-adaptive skilled, skilled and adept finished communicate problems, other special skills.

Nasir M. A. N. et al. (2011), the industry now is more focused on employees who have both technical and non-technical skills. Mustapha R. et al. (2011), have technical and non-technical skills are two kritirea desired by the industry now so that they obtain a quality workforce. According Ramli R. et al. (2013), the adoption and mastery of non-technical skills can build confident individuals, competent and competitive so as to manage an organization forward is one of the demands and requirements of the job market. With non-technical skills that make individuals strong added value more than other individuals.

Overall, the majority of the elements of generic skills that students are assessed based on the perspective of student leadership and management skills. In addition, there are elements that need to be enhanced by students to stage the elements are at a very high level.

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