LEVEL OF GENERIC SKILLS REQUIREMENT AMONG TECHNICIAN IN POLYTECHNIC

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Abstract

Generic skills are important skills for worker that required by almost of the employments. Beside technical skills, generic skills are designed for employee in order to produce excellent and efficient job. This research is focus on to identify the level of generic skills desirable by technician and the level of skills that they have from lecturer, student and technician perspective in polytechnic. The total of research respondent is 366 which consist of lecturers, students and technicians. The data is collected from questionnaire and analyzed by SPSS v.12 programmer to get mean score, standard deviation, factor analysis and ANOVA testing. Research finding found that the level of generic skills requirement among the technician is at a higher level (mean=4.156) and also mastering in generic skills at the higher level too (mean=4.184). Mean while, by the ANOVA analysis it is found that there is a significant different on generic skills technician level of requirement among the polytechnic. Through factor analysis, it is found nine (9) of generic skills are imperative to equip by technician. Based on research finding, hopefully a significant authority board will take a move to increase the generic skills among technician and other staffs in polytechnic.

Keyword. Generic Skills, Technician and Polytechnic

INTRODUCTION

Equipping skills and knowledge of work competencies requirement to man power are core challenge in Malaysia to support the country becoming a developed country and effort able to compete in economic competitiveness world wide. The development and value added of knowledge as a main motivator for economic growth. According to Zalina, Raziah and Rizaudin (2001), mastering the knowledge will assist firm or industries to develop more effective production process approach and be capable to fulfill customers demand. Thus men power resources have to equip with enough knowledge consecutively to place Malaysia as a respected industrial country. Among the popular mechanism in delivering skills and knowledge to man power is through technical and vocational training institution (Dessler and Garry, 2000). In the course of well prepared training and education program, man power must trained with skills and knowledge that required by industry such as technology skill, communication skill, self discipline, creative and flexibility.

World wide globalization concept in nowadays era is also influencing in the need of man power have to equip with multi knowledge and skills to fulfill work requirement. The knowledge is not stand alone but it developed in parallel with other disciplines in order to carry out the multi discipline.

Technician is a post in the array of position in work place which the task is dominant on responsibility to insure the tool using in production system is well working, running smoothly and effectively. The minima qualification to get this job is the candidate must pass Malaysia Education Certificate examination. To entitle sitting the examination the students at least have to complete five years Malaysia secondary educational system. Other than that to be a technician candidate also passed the examination conducted by technical and vocational training centre at certificate level.

Therefore sequentially to achieve the target of Malaysia being a developed country, Education Ministry has taken initiative to perform technical and educational system that responsibly on producing technician for technical industrial. The government has allocated a big amount of money for increase the number of technician.

There have been numerous studies conducted on generic skills. However, not all focus on the same aspect. Based on previous studies, the researchers found that generic skills are very important and every individual must possess them depending on the nature of jobs they are in. A study done by the Australian Chamber of Commerce and Industry (ACCI, 2002) found that most employers today need employees who not only possess technical but generic skills as well in order to raise productivity and competitiveness. This is similar to the finding of a study done by Rizaudin et al (2000) that industries nowadays need knowledge as investments to increase productive production factor capacity other than to make changes in the design of new production process compared to traditional production whereby the most important input those days were labour and capital.

Other than that, there are several previous findings that could identify skills and attributes needed by the industry. Based on a study by Ahmad et al (2005) the skills and attributes needed by the industry are categorized into seven main generic skills which are communication, problem solving, decision making, leadership, teamwork, interpersonal and management. Meanwhile, the Ministry of Higher Education Malaysia (2006) identified seven generic skills needed by graduates are communication, critical thinking and problem solving, teamwork, lifelong learning and information technology, entrepreneurship, moral and professional ethics and leadership.

A study conducted on generic skills among technicians show that the necessary skills needed can be categorized into three groups and one of them is personal and commercial skills whereby such skills are considered as generic skills. This study was conducted by the Institute for Employment Studies (IES, 2002).

Based on the studies above, it can be concluded that there are many studies done related to generic skills and mostly on the importance and necessity of generic skills from the view point of the employers or industry. There are also studies done to identify skills and attributes needed by the industry.

Objective of this research is to identify the level of generic skills that equipped among technician in polytechnic. Beside that it is also intends to identify the level of generic skills need by the technician.

METHOD

Research methodology implemented in this research is appeared as survey descriptive research. This method is chose because it is more appropriate to research format set up by researcher, practically and realistic for gaining good response from respondent. According to Cohen et.al (1994), method of survey descriptive research is almost used by researcher with the questionnaire instrument. Research questionnaire is a back bone for research. It help researcher to get the valid data from respondents in order to achieve the research objective. The importance of questionnaire as instrument in educational research is supported by Wiersma (1977) that he said by using questionnaire, a lot of data can be collected in a short times and the received answer is more consistent compare to another instruments.

Through questionnaire respondent has to mark the decided answer and then the researcher will analyze the data based on the scale for every answer given by respondent. Therefore researcher chooses descriptive research design that used questionnaire since it is easer, economic, practical and effectiveness in order to collect the data.

Questionnaire consist of division A, division B and division C. Division A is to obtain respondent demography particulars and division B is consist of question item for measure the level of generic skill required by respondent. Moreover the division C is open handed question to obtain respondent opinion about generic skills required other then particular in division B.

In this research researcher had choose five scale of Likert Scale as shown in Table 1 to determine the level of generic skill need by technician in polytechnic. According to Najib (2003), by using Likert Scale, respondent will choose the answer of from once extreme to other extreme. Five scale of Likert Scale is used for valuing the level of generic skill need by technician in polytechnic.

Researcher conducted this research at four polytechnic in Malaysia Peninsular. Researcher had label the polytechnic with label 1, 2, 3 and 4. Four such polytechnics are representative of all polytechnics in Malaysia. These four polytechnic were selected by cluster randomly and believed had fulfilled the purpose of the research. All of the polytechnic are also utilized standard management and teaching and learning process set by similar ministry and administration. Therefore no doubt where were the technician work they are expected to give the same result. This research finding can be use for polytechnic in Malaysia reference and guide line.

Populations are consisting of lecturer and technician taken from all departments in four Malaysia polytechnics. The total of respondent is 366. Sampling method apply in this research is Random Sampling Method. According to McMillan (1996) the random sampling gave every individual in a population opportunity to be selected as a sample.

Descriptive statistic analysis had applied to obtain mean score and standard deviation and inference statistic applied for analyzing differentiate between variables to meet research objectives. Mean score statistic interpretation used in this research is constructed by modifying Lendal (1997) idea. The mean score value interpretation are 1.0 to 2.3 = not agree, 2.4 to 3.7= moderate agree, and 3.8 to 5=agree whenever alpha 0.05 value is use to decided the significant differentiate of variable.

RESULT AND DISCUSSION

This research has conducted on 366 respondents which are surrounded of lecturer and technician from all sorts of departments in polytechnic in Malaysia. From out come of research analysis finding, it is found that the figure of female respondents are 222 (60.7%), compare to female respondents are 144 (39.3%). The figure of respondent age 18 to 23 years old are 94 (25.7%), and age more than 24 years old are 72 (19.7%). Respondents who are diploma holder or still in diploma course had dominated this research whereby all of them are 214 (58.5%). It followed by certificate holder 124 (33.9%) and respondent with first degree or master degree is very low, where by there are 12 (3.3%).

Table 2: Mean Score of Overall Items

Overall Mean Score	Mean	Standard Deviation	Interpretation
Level of need	4.1560	0.41833	Agreed
Level of effeciency	4.1839	0.43839	Agreed

Based on Table 2, over all mean score of the level of generic skill need is 4.1560 where it showed that the respondent agree. Mean while standard deviation value for the level of need is 0.41833. It is explain that respondents answer is focus on agreed scale. Mean score value at this level shows respondents agree that generic skills is strongly need by technicians of polytechnic. It also to the level of mastery where the mean score is 4.1839 that shows respondents level of mastery among technicians are higher. Jn the meantime the standard deviation value for the mastery level is 0.43839, this shows the level of mastery in generic skills among technician is higher where respond from respondents are center of attention on agree scale.

Through analysis factor, it identified that 23 domains or constructs are covered by more than 1 Eigen value as shows in Table 3.

Table 4 shows the results of ANOVA analysis in favor of test the difference level generic skills need among technician in polytechnic Significant value for every polytechnic in this table show s that there are existed the difference on generic skills need upon technician where the significant value is less than 0.005. Therefore H_{a1} is accepted.

Table 5 shows the result of ANOVA analysis in favor of test the difference level mastery in generic skills among technician upon polytechnic. Based on the data of significant values in Table 5, it shows that there are existed the difference on generic skills need among technician where the significant value is less than 0.05. Therefore H02 is accepted.

According to above analysis and discussion it is found that generic skills need among technician in polytechnic is at higher level. It is probably because of almost job seekers believe that the unemployment on Malaysian citizens are manipulated by lack of generic among the graduates.

It is conjunction with the statement point out by Yulpisman (2006) that reported the Prime Minister Datuk Seri Abdullah Ahmad Badawi in their speech for announcing the Malaysia Cabinet, was given the clearly weakness sweep on Malaysia graduate right now. There include the lack of communication skills, lack of the ability to think, lack of initiative, lack of self confidence, and it can be concluded that there are contribute to increasing the ratio of unemployment in the country.

Furthermore research finding on the mastery of generic skills among polytechnic technician shows it is at the high level. Based on this mean score value it shows that technician in polytechnic have high level of generic skills mastery

This research is also shows that there are nine skills were identified to be mastery by technician in polytechnic used factor analysis. Some of them are management skills, problem solving skill, working in group skill, communication skill, interpretation skill, leadership skill, interpersonal skill, decision making skill, and initiative skill.

Thought the respected research data finding it indicate that communication skills is covered by highest mean score values. Mean while the initiative skills is covered by the lowerst mean score values.

In the process of researching, it is appears the question is there the differences among four polytechnics on the level of the need of generic skills. To obtain the answer of the question, ANOVA analysis is conducted. Research finding shows there is a significant different the level of generic skills needs among polytechnic.

Mean while the difference level of mastering generic skills among four polytechnics shows that there is no significant different the level of mastering in generic skills among the technician from four polytechnics. It is conjunction with that the level of mastering in generic skills is same among four polytechnics.

CONCLUSION

The result of this study shows that the need for generic skills among technicians at polytechnics is high. This might have been due to the awareness for generic skills among lecturers, students and technicians. Thus, GSs are required of technicians at every polytechnic toward realizing the mission and visions of the relevant polytechnics.

Results of the study also show that there are nine (9) generic skills identified and required among polytechnicians at every polytechnic. Results also show that communication, teamwork, interpersonal and decision making were among the highly needed skills.

This shows that technicians need to acquire the necessary generic skills for quality work by them. Therefore, every staff including technicians play very important roles in the infusion of generic skills among students. In turn, this helps to achieve the national aspiration in helping polytechnics graduates with the various skills both technical and generic skills.

Based on the result of this discussion the researchers are able to suggest several recommendations to the relevant authority in raising the quality of education in producing workers or graduates who are competent in both the technical and generic skills. It is suggested that management of polytechnic should give technician short courses related generic skills and technician always embedded the generis skills in working environment. Hopefully, the suggestions provided would be of benefit to all parties involved

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Appendix

Table 1 : Likert Scale

1	Strongly Not Agree
2	Not Agree
3	Not Sure
4	Agree
5	Strongly Agree

Table 3: Factors and Itemizes Categories

Number	Skills	Itemizes	Total
1	Management	37, 62, 66, 67, 68, 69, 70, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 91, 92 ,93, 94, 95, 96, 97 , 98, 99, 100, 101, 102, 103, 104, 105, 106	35
2	Problem Solving	15, 17, 18, 19, 20, 21, 22, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 36, 38, 45, 46	21
3	Working in Group	49, 50, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 76	16
4	Communication	1, 2, 3, 4, 5, 6, 7, 8	8
5	Interpreting	9, 10, 11, 12, 13	5
6	Leadership	41, 42, 71	3
7	Interpersonal	44, 73, 74, 75	4
8	Decision Making	35, 48, 51	3
9	Initiative	39,40	2
		Total	**97**

Table 4: Anova Analysis of Need Level

Polytechnic	N	Subset for alpha = .05	
		1	2
PKU	100	4.0903	
PUO	104	4.1218	4.1218
PKB	88	4.1827	4.1827
PJB	74		4.2609
Sig.		.443	.113

Table 5: Anova Analysis of Effeciency Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.286	3	.762	4.823	.005
Within Groups	7.900	50	.158		
Total	10.186	53			