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The Implementation Of The Generic Skills Through Co-Curriculur At The Polytechnics To Fulfill The Industrial Needs In Malaysia

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Abstract:
The purpose of this paper is to determine whether co-curricular at the polytechnics in Malaysia can carry out generic skills towards the students to fulfill the industrial needs in Malaysia. The design of the research that has been used is descriptive research approach. The data collection that has been done by using the triangulation method, it involved 291 lectures, 409 students and 381 of the management staff from 16 categories of industries based on export oriented in Malaysia. The result of the research had identified a few generic skills for the industrial needs in Malaysia and the co-curricular in the polytechnic in Malaysia had carried out the skills. The result from the One-way Anova shows that there is significant differentiation among the lectures, students and industries towards the needs of generic skills for Malaysian industries with the generic skills that has been implemented through co-curricular in the polytechnics in Malaysia. However the analysis mean shows that the differentiation is at the agreement level. This research is very significant for those who are involved with the discipline in co-curricular whether for the students or lecturers or the

education institutions. This is because this research shows that through co-curricular the technical education students could get the generic skills that can be useful in their career.

Keywords: Generic Skill, co-curricular, industrial needs

1. Introduction

Malaysia is very progressive and proactive to become a develop country based on Vision 2020. One of the nine vision challenges is to develop a scientific and progressive society, the society with a higher capability to change and looking forward, not only to become the consumers for the technology facilities but also to expand the future technology and scientific civilization. At the same time Vision 2020 do not miss out the human resource development. In this case all the educational institutions (for example: Polytechnic) has an important role together with the industries to implement the challenges based on Vision 2020, especially to produce a Malaysian Citizen with the skills in scientific, technology and humanities. So that the educational institutions become the resource for industries (Mohd. Feroz Abu Bakar, 2001). In this case the educational institutions supposed to train the workers that are balance between technical skills and humanities. Regarding to the above opinion, I'm trying to purpose the idea for emergent the human resource in Malaysia is based on the generic skills through co-curricular in polytechnic for the industrial needs in Malaysia.

2. Statement of the Problem

Vocational and technical institutions are based on giving chances to the students in the certificate and diploma level to enter the labour market. So the students must be familiar with the knowledge, technical skills and the skill related with the industrial needs, this is the opinion by Warwick (1989), Abbot (1997), Strom (1996) and Wirth (1992). One of the vocational and technical institutions in Malaysia is the polytechnic. Polytechnic an institutional to produce the semi professional in the field of engineering and commerce that is balance in technical skills and humanity at the certificate and diploma level to fulfill the needs of human resource in the government and the private sector. Furthermore, according to Andy KH. Seo (2003), the generic skills are needed as a complement to the knowledge as a theory or practical for the students in the polytechnic.

However for the implementation of the generic skills throughout curriculum alone is not enough, since in the polytechnic the focus of the academic load is at the practical works in the workshop and the theoretical in the classroom is based on the results of the practical works and examinations oriented (Andy KH. Seo, 2003 and Ismail Bakar, 2004). In this case, co-curricular is the alternative for the students to learn the generic skills.

Co-curricular is compulsory in Malaysian Polytechnic in year 2000. Although very few researches had been done related with co-curricular in the polytechnic and technical education institution in Malaysia and it shows that co-curricular has a positive impact among respondent such as Mat Aris Abd.Hadi (1994), Mohd.Saufi Zakaria (1999), Roslan Ahmad (1994) dan Hisham Abd. Rahmad (2000). However the research had been done before co-curricular is compulsory in Malaysian Polytechnic and there is no research had been done to see direct relation between co-curricular in polytechnic, generic skills and the industrial needs.

Co-curricular can be a complement to the curriculum and it can develop the individual potential, according to the several academicians and researchers such as Walker (2003), Keystone Central School District (2002), Switzer (2002), National Academy Foundation (2001), Matthews (2000), Potrafka et. al (1997), California State University (1994), Adnan Kamis (1993), Yusoff Ismail (1993), Vasudevan T. Arosoo (1988), Michigan State University (1988) and Teng Boon Tong (1984). This is relevant with the mission of the Vocational and Technical Curriculum Sector, Department of Technical Education, Malaysian Ministry of Education, that is, "To build up the Vocational and Technical Curriculum to develop the balance individual that is progressive, creative, inovative, critical thinking and with imposing ethics towards the development of technoloy and economy country." Deputy Chief Director of Malaysian Technical of Education, Ahmad Sipon (2003) also agreed that co-curricular is important to develop the generic skills to fulfill the career needs among the students of the Malaysian polytechnic.

According to the statement and the evidence given, it is an advantage to carry out a research about the generic skills in the cocurricular activities in polytechnic to fulfill industrial needs in Malaysia.

In addition there is no research had been done about the relation of the co-curricular in the polytechnic, the generic skills and the industrial needs whether in Malaysia or other contries.

3. Research Questions

Reseach questions as below,

a)   What are the kinds of the generic skills needed by the industrial management team in Malaysia?

b)   How far does the implementation of the generic skills in the co-curricular activities among the co-curricular lecturers in the polytechnics in Malaysia?

c)   How does the applied of the generic skills been accepted throughout the co-curricular activities among the students in the polytechnics in Malaysia?

d)   What are the differences between the generic skills needed by the industrial sector in Malaysia with the generic skills that have been implemented through co-curricular in the Malaysian Polytechnic?

4. Literature Review

Marginson (1993) has defined the generic skills in general included communication skills, team work skills, interpersonal skills, ability to analyses and conceptual and to understand themselves (intrapersonal). West (2000) has made a report based on the Employment Department (1989), that the generic skills are needed in all category employment. The skills are communication, problem solving, creating opportunity, critical thinking, take risk, team work, sources management, responsible to personal development and long life study.

Kearns (2001), the generic skills are the skills which can be used across a large number of different occupations. It include the key competencies (or key skills) but extend beyond these, it also include a range of other cognitive, personal, and interpersonal skills which are relevant to employability. Dawe (2002), the generic skills are recognize as soft skills, behaviour skills, enterprise skills, key competencies, core skills, employability skills and people skills. Basically generic skills is the general skills which can be used in many employment and not specific in one employment or industry.

Based on research by Wyber and De La Harpe (2000) and Radloff, A. and De La Harpe, B. (2002) that the educational institutions not only to develop knowledge and expert to students but also to develop generic skills such as writing skills, making decision, communication, team work, problem solving, information literacy and self management skills. Therefore, educational institutions has to develop the skills among the employee as needed by the industry. In other hand, educational institutions must concentrate to develop human resource through curriculum and co-curricular.

According to Oliver (2000), in a real situation, the generic skills are difficult to teach through formal education. Glover et. al (2000) also agreed that many educational institutions had related generic skills and curricular in informal situation. Where else according to Reigeluth (1999) the generic skills can be develop through multi discipline. Therefore, it is clear that co-curricular will be able to develop generic skills among the students.

Zaimi Abu Bakar (1996) has defined that co-curricular is an activity which conducted after school hours. The term can be used interchangeably with extracurricular activities, co-curricular activities, extra class activities, pupil activities, socializing activities, allied activities, students activities and school activities. Kreps (2002) also concluded that many activities has related with co-curricular such as research project, opportunity to study abroad, internship, social service project, participation in society, organization development, participation as athlete, attended to any program or competition and working at the campus.

Actually there are many reasons why students should joint the co-curricular activities in educational institutions. One of the main reason is to develop their skills in human resource. Keystone Central School District, 2002 had explain that all co-curricular activities; such as, athletics, band, chorus, musicals, dramatic and cultural program are an extremely important part of a student's education.

Survey of business and industry clearly indicate that they want their employees to be able to work cooperatively, in teams, solve problem, take the initiative and produce with pride. These are all the skills which can be developed through co-curricular activity participation. This idea supported by Matthews (2000) which elaborate co-curricular philosophy at Banbury Cathedral Grammar School as below,

" In a world where a young person faces the prospect of many different jobs, rather than a career with one or two employers, and the possibility of being challenged by a career yet to be invented, transferable skills are becoming more important than they ever were before. Students need to learn how to communicate, how to co-operate, how to think and act critically, how to be creative, how to care about others and how to be enterprising. Many of these skills will be learnt of the sports field or on the stage as an actor or as a member of the orchestra or as a debater…"

The same reasons happened for Malaysian education system. Many of the professionals wrote about the positive impact to students that participated in the co-curricular activities in their educational institutions. For example Ab. Alim Ab Rahman (1999) and Malaysian Ministry of Education (2000), had mentioned the benefits of the co-curricular activities to students such as leadership experience, motivation, communication, discipline, team work, know how to making decision and problem solving.

Based on the research by Hazilah Mohd. Amin et. all (2002), among the skills needed for the industries are ability to work in group, the intention to work hard, ability to learn, communication, time management, problem solving, motivation and analytical skills.

In the research done by Marginson (1993), among the skills needed for industries are oral communication, team work, interpersonal and ability to analyze and conceptual. He also suggested that educational institutions should be concentrate about decision making, problem solving and general thinking. According to Career – Space Project (2001), there are also a few skills from others technical skills in Europe. The skills are creativity and artistic, communication, interpersonal and working in group.

Eraut (1994), had described about personal qualities needed by the workers are intellectual, motivation, learning skills, general knowledge and personality. Otter (1989) also has portray a few criteria such as initiative, commitment, creativity, planning skills, leadership, influence skills, confidence , interpersonal, critical thinking, save control and responsive. In the research done by Velde (1997) the skills are needed by employer for their employee are good personality, confidence, honesty, committed, ability to good presentation, punctual, motivation, initiative, patient, polite, independent, can follow order and honesty, communication, team work and flexible.

5. Conceptual Framework

Figure 1 shows that all the educational institutions (such as polytechnic) in Malaysia that had implemented the co-curricular as compulsory had the potential to develop and guidance all the skills to their students. All the skills are the generic skills needed by employee to fulfill the industries requirements, therefore to develop the human resource in Malaysia.

6. Methodology

The design of the research that has been used is the descriptive approach. The data collection that has been done by using triangulation method, it involved 291 lectures and 409 students of Malaysian Polytechnics and 381 of the management staff from 16 categories of industries based on export oriented in Malaysia. The details related with the amount of the sample and the selection of the sample as in the Table 1.

Instrument that had been used including three set of questionnaire that had been distributed to the industries, lectures and students. Each research questionnaire is divided into part 1, 2 and 3.Part 1 is the particulars about the respondent and organization. Part 2 contains 105 statements/items related to generic skills (Table 2). Part 3 is about extra information related to generic skills that have not been listed in Part 2, which in respondent's opinion, are important to them.

All the items that had been listed in the questionnaire form had the highest reliability according to the reliability analyses that had been conducted at the pilot test. The alpha value for the industrial

4

questionnaire is 0.9652, lecturer (0.9929) and students (0.9834). The data obtained had been analyse using the SPSS Program version 11.5. The descriptive statistic had been used to get the mean and the alpha value 0.05 had been use to certified whether there are no significant differences or there are significant differences in the One-Way ANOVA had been carried out.

7. Findings

Below are the findings from the research that had been done,

a) A few of generic skills needed by the industries sector in Malaysia for their workers are the communication skill, problem solving, decision making, leadership, working in group, interpersonal and management (Table 3)

b) The co-curricular lecturer in the polytechnic in Malaysia admitted that they had taught the generic skills such as communication skill, problem solving, decision making, leadership, working in group, interpersonal and management (Table 3) throughout the co-curricular.

c) The student who had undergo the co-curricular in the polytechnic in Malaysia agreed that they can applied the generic skills such as communication skill, problem solving, decision making, leadership, working in group, interpersonal and management (Table 3) after they had learnt it through the co-curricular in the polytechnic.

d) The communication skills which had been agreed by the respondents are oral in Malay and English language, writing in Malay and English language, listening. Giving and receiving instruction, giving and understanding the information. Furthermore the respondent agreed about ability to interpret the symbol, sign, motto, logo, colour and body language.

e) The skills of making decision which had been agreed by the respondent are the ability to identify the need of making decision, to carry out the process of making decision such as listing, selecting the implement and to do reflection towards the alternative in decision making. They also agreed with the skills such as brave and responsibility for the decision that they had made and the skill of making decision at the right time.

f) In the context of the management skill, the finding shows that all the basic principles in the management had been approved needed by the respondent. The basic principles are planning, organizational, implementation, reflection, conflict and controlling. The planning included the skills in deciding the aim, objective, program and the usage of organization source. The organizational is referred to the skill for structural, delegate the task, identifying the strength and the weakness of the organization. The implementations that can be seen in this context are the skills in money management, human resource, equipment, documentation and time. The respondent also agreed the worker who had the skill with the basic management principles such as reflection that included a few skill such as doing evaluation to themself elf, other person, aim, objective, program, strategy in the organization. Furthermore, they also agreed towards a few of the controlling organization principles such as to determine the standard, identifying mistake, supervise the development, to make sure that member had the same aim and to control the misspend of the resource. The respondent also agreed towards a few of the skills in the context that the skills related with the organization conflict such as handling the conflict individually, negotiation, customer's complaint and also included the skill to create conflict for the development of the organization.

g) The leadership skills that had been agreed by the respondent are giving instruction, willing to work overtime without payment, flexibility towards any condition, giving motivation, giving example and guidance to the friend, courageous to face anticipation, be able to do any changes, working without supervision, respect and be fair to others, carry out the authority with trustworthy, can accept exhortation, can control emotion, take care the welfare of our member, honesty, accountability, be competitive, thinking intellectuality and committed in carry out the duty.

h) The respondent also agreed with a few skills in the skill of working in group such as helping committee member, solving the problems and making decisions together, contribution and giving ideas to the members of the group, working together with the executive and the workers also can accept critics and identified the strategy ant the objective of the group.

i) Moreover the respondent also agreed with a few skills that related with the interpersonal skill

such as explaining idea to the executive and the workers, build up positive personality, respect toward principles and can accept others as they are, mix with others from different race, level and states.

j) The skills of problem solving that had been agreed by the respondent such as awareness the problem is exist, to carry out the process of problem solving that are identifying the sources, listing, selecting, implementation and doing reflection towards the alternative in problem solving. In addition, also included bravery, confident, patience and always had the motivation when facing with the problems.

k) In addition, a few other skills also had been suggested by the industrial sector (Table 4) and it was agreed the few of the skill had been taught through co-curricular in the polytechnic by the lecturer and students that are discipline, safety, information technology, computer and technical.

l) According Table 5, the significant value from the result of the One-Way ANOVA analyses for all main items about generic skills and the overall of the generic skill is 0.0000 that is less than the alpha value that is 0.05, so there are significant differences between the needs of generic skill for the industrial sector with the generic skill that had been carried out through co-curricular in polytechnic in Malaysia.

m) From the result of the Least Significant Differences (LSD) test in Table 6, it is very clear that there are significant differences between the generic skill needs by the industrial sector with the generic skill that had been carried out by the lectures and the acceptation by the students through the co-curricular. For the lecturers and the students there are no significant differences.

n) However, if referred in Table 6, the findings in the mean value shows that all the mean whether the mean of the lectures, students or industries also included in the mean value group that show there is agreement whether in context of the generic skill that had been taught with excellence by the lectures in Malaysian Polytechnics, the students can applied the generic skills had been accepted through co-curricular or the generic skill needed by the Malaysian industrial sector for their worker. As for this, it is clear that there are a significant difference between the generic skills needed by the industrial sector with the one that had been implemented is more to the differential at the degree of agreement. This means the generic skills that had been implemented through co-curricular in polytechnic in Malaysia are the needed by the industrial sector. Therefore the entire mean the generic skill and the overall mean of the generic skill for industries is higher than the mean for the lecturers and the students. So the implementation of the generic skill through co-curricular in the Malaysian polytechnic is relatively less excellent to fulfill the industrial need.

8. Conclusion

The conclusion from this research is that the co - curricular activity in the polytechnic in Malaysia will help the student to learn the generic skills to prepare themselves as a worker that can fulfill the industrial needs.

The awareness related with the co-curricular can be the complement to the curriculum should be practice by the educator because this mean the knowledge and the skills that can not be cover through curriculum can be developed through co- curricular. For example, the knowledge about concept related to commerce, business, economy and marketing can be obtained by the student practically through commerce society or through the practical in business organized by the club or society, uniform unit, sport, game in any institutional education. Furthermore co-curricular also can give the direct impact with the preparation for student before they enter their career life.

Moreover is what the curriculum is about, co-curricular is also has the important role for the development of the student career when they meet with their employee whether during the interview when they want to apply the job or promotion in the government or private sector, beside their academic achievement, they also had to master a few other skill (in this case it is referred to the generic skill) and the generic skill can be developed through co-curricular as the evidence shows through the research that had been carried out.

6

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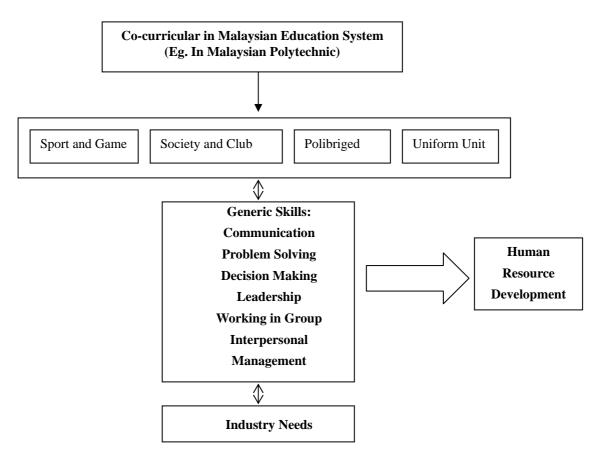
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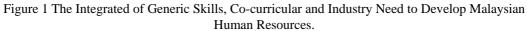
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Figure 1 The Integrated of Generic Skills, Co-curricular and Industry Need to Develop Malaysian Human Resources.

Table 1 The Total of Sampel for Each Category of Respondent

Category of Respondent	Population (2004)	Sampel base Krejeie and Morgan (1976)	Collection sample	Choosen Sampling
Lecturer for the co-curricular in Malaysian polytechnic.	784	260	291	Cluster sampling
Students of plytechnic.	40,000	380	409	Cluster sampling
Presentative fram the export oriented industry in Malaysia.	6086	361	381	Random sampling

Tabe 2 The Total of Items for Each Generic Skill.

Generic Skills	Numbers of Item
Communication	15
Problem solving	10
Decision making	10
Leadership	20
Interpersonal	10
Working in Group	10
Management	30
Total	105

Table 3 Overall Mean for Each of the Generic Skill for Each Respondent.

Respondent Generic skill	Industry (Mean)	Lecturer (Mean)	Student (Mean)
Communication	4.3171	4.0129	4.0153
Problem solving	4.4679	4.0438	4.0942
Decision making	4.4211	4.0509	4.0714
Leadership	4.4201	4.1663	4.1396
Interpersonal	4.3992	4.1897	4.2332
Working in Group	4.2406	4.1093	4.1099
Management	4.1637	3.9902	3.9703
Overall mean	4.3470	4.0809	4.0908

Table 4 Other Generic Skill that had been suggested by the Respondent.

Industry	Lecturer	Student
Multi language	Body language	Independent
Dicipline	Independent	Dicipline
Learning	Self Belonging	Culture
Information technology	Information technology	First aid
Motivation	Dicipline	Personality
Computer	Protocol	Life skill
Technical	First aid	Self defense
Presentation	Personality	Technical
Analytical	Safety	computer
Safety and health	Self management	Audio visual

Table 5 One-Way Anova Test Towards the Generic Skills Needed by the Indutry Sector in Malaysia and Lecturer and Student in Malaysian Polytechnic

Generic skill	Sigfinicant value
Communication	0.000
Problem solving	0.000
Decision making	0.000
Leadership	0.000
Interpersonal	0.000
Working in Group	0.000
Management	0.000
Overall generic skill	0.000

Table 6 LSD Test Towards the Generic Skills Needed by the Indutry Sector in Malaysia and Lecturer and Student in Malaysian Polytechnic

Generic Skill	Responden (Mean)		Differentiate	Significant
Communication	Lecturer	(4.0138)	Industry and lecturer	0.000
	Student	(4.0138)	Industry and student	0.000
	Industry	(4.1372)	*(Lecturer and Student)	*0.999
Problem solving	Lecturer	(4.0407)	Industry and lecturer	0.000
	Student	(4.0966)	Industry and student	0.000
	Industry	(4.4667)	*(Lecturer and Student)	*0.141
Decision making	Lecturer	(4.0478)	Industry and lecturer	0.000
	Student	(4.0730)	Industry and student	0.000
	Industry	(4.4208)	*(Lecturer and Student)	*0.516
Leadership	Lecturer	(4.1403)	Industry and lecturer	0.000
	Student	(4.1651)	Industry and student	0.000
	Industry	(4.4195)	*(Lecturer and Student)	*0.469
Interpersonal	Lecturer	(4.1880)	Industry and lecturer	0.000
	Student	4.2330)	Industry and student	0.000
	Industry	(4.4003)	*(Lecturer and Student)	*0.227
Working in Group	Lecturer	(4.1083)	Industry and lecturer	0.000
	Student	(4.1104)	Industry and student	0.000
	Industry	(4.2404)	*(Lecturer and Student)	*0.954
Management	Lecturer	(3.9706)	Industry and lecturer	0.000
	Student	(3.9895)	Industry and student	0.000
	Industry	4.1635)	*(Lecturer and Student)	*0.620
Overall generic skill	Lecturer	(4.0794)	Industry and lecturer	0.000
	Student	(4.0913)	Industry and student	0.000
	Industry	(4.3469)	*(Lecturer and Student)	*0.699

* (No differences)