Soft Skills Requirement for Employability To Engineering Students. A Case Study at Malaysian Technical University.

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Abstract

This study was conducted to determine the correlation between element of soft skills (leadership) and Islamic value (integrity) and to examine differences by gender among higher education students in Malaysia. The sample groups are undergraduate students of Malaysian Technical University Network (MTUN) – Universiti Malaysia Pahang (UMP), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Tun Hussein Onn (UTHM) and Universiti Malaysia Perlis (UNiMAP). The number of respondents was 480 students distributed according to group and random sampling. The acquired data was analysed using Statistical Package for Social Sciences (SPSS) version 19.0 for mean, standard deviation, t-Test and Pearson Correlation. The findings showed the high level of soft skills and integrity possessed by the students and there is a significant correlation between leadership skills and Islamic value (integrity). On the other hand, there is no significant difference between male and female students in mastering leadership skills.

Key Word: Integrity, Leadership, Soft Skills.

1.1   Introduction

Centuries old monarchy, colonialism and the oppressive rule of their own people have brought about moral and spiritual degeneration of Muslims throughout the world. To retrieve them from this degeneration, it is about time that the Muslim Ummah restructures its educational priorities along Islamic lines, as well as fulfilling the existing needs. By virtue of such an educational program, the future generations will become the torch-bearers of Islamic values and play an effective role in the present world.

The challenges of modern times call for the rebuilding of the structure of our educational program on such a foundation as to fulfil our spiritual as well as temporary obligations. Today we need an education system which can produce, what the late Sayyid Abul A'la Mawdudi said, "Muslim philosopher, Muslim scientist, Muslim economist. Muslim jurist, Muslim statesman, in brief, Muslim experts in all fields of knowledge who would reconstruct the social order in accordance with the tenets of Islam."(Ahmad Zainal Abidin et al, 2007).

The continuously changing competitive, global and knowledge-based environment requires a workforce with appropriate skills to push organization forward. There is a wide agreement on the need to significantly upgrade the quality of education in Malaysian universities to match the market requirements. On the other hand, Malaysia is going through an economic transformation and fast entering the industrialization era. This development shows that its industries are progressing very fast and becoming more technologically advance. Therefore, Malaysia needs more expert work force to fulfil the needs and requirement of the industry (Mohamad Sattar Rasul et al. 2009).The Malaysian

Ministry of Higher Education has categorized seven element of generic skills that one need to be integrated and implemented in the curricular the public universities. One of the main elements of generic skills . Generic skills are the general skills, qualities, knowledge, abilities and traits that a person should possess to succeed in one's studies and career, Such as enable a person to function and contribute effectively in solving problems, communicating effectively, thinking critically and creatively and acting as effective team members at work. The success of an education system depends greatly on the teachers who are in the forefront in educating the children to be the future citizens with the right outlook. Lecturers have to be dedicated and committed. They have to be rightly chosen and properly trained and be treated as professionals with their morale kept high (Abdul Rahman Arshad, 2007). The Malaysian philosophy of education states that:

Education in Malaysia is an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who posses high moral standards, and who are responsible and capable of achieving a high level of personal well-being able to contribute to the betterment of the family, the society and the nation at large.

Education can be defined as follows to educate a person or things, to train by formal instruction and supervised practice especially in a skill, trade, or profession and to develop mentally and morally especially by instruction (Mohd Fauzi et al., 2008). Education can be defined as systematic effort by a society to transfer knowledge and values to the next generation to develop their potential as an individual towards the building of the society (Ibrahim Mamat, 1993). Yusof al-Qardhawi stress that the education is not merely transferring values. He further stated that education is process that happens throughout a life time involving the thinking, spiritual and emotional, the physical and mental as well as value and action. To sum, education a life time quest to seek the truth in life. It helps a person in facing the challenges of life in times to come. Education would only be meaningful when one is able to transform what is being learned to his/her actions that not only conforms and accepted by the society but also is aligned with faith and religion (Mohd Fauzi et al., 2008). According to Professor H.H Home, "*Education is the eternal process of superior adjustment of the physically and mentally developed, free, conscious human being to God, as manifested in the intellectual, emotional and volitional environment of man*."And professor Niblett writes that *"the end of education is not happiness" but rather to develop greater capacity for being aware; to deepen human understanding perhaps inevitably through conflict, struggle and suffering...to make right action natural."*

Education is a continuous process of the learning and assimilating of the culture values and ideals of society by the younger generation. It is comprehensive process which embraces all aspects of the life of the younger generation and prepares them for the life-struggle ahead of them. (Afzalur Rahman, 1995). In the education scenario, an effective leader is needed to bring about success in any educational reform. A leader needs to have precise vision and a carefully stated mission to bring about proper reforms to an organization. He must not only be able to influence the subordinates to change towards the requirement of the reform, but also use available human and physical resources intelligent towards the achievement of the organizational objectives. Nevertheless, in the modern world of complexities and further uncertainties the challenge faced by an educational leader is enormous. The task of moulding future generation with knowledge, wisdom and good moral values needs a leadership theory that transcends matters of behaviour, situational and traits.

Numerous skills have been identified as important to employers, including leadership skills (Gale, 2002; Gerber, 2003; Kerka, 1990; Stronge, 1998; Santosus, 2003). As a result, institutions have introduced programs designed to train students on those leadership skills (Freeman, Knott, & Schwartz, 1994; Posner & Brodsky, 1993; Riggio, Ciulla, & Sorenson, 2003). Leadership is currently one of the most talked about issues in business and organisation and leadership is viewed as the key to organisational success. Leadership is defined as the ability to coordinate and supervise the activities of team members, assess team performance, assign tasks, plan and organize and establish a positive atmosphere for team interaction (O'Neil et al,.1997). Kuehl defined leadership as merely providing direction for the team (Kuehl, 2001).

2.0 Literature Review

Organizations today are faced with the challenge of ensuring the continued availability of capable leaders through succession planning. The Malaysian public service is no exception. It is faced with necessity of grooming potential leaders. Identifying and developing people with potential for higher leadership positions are a hallmark of a leader (John Antony Xavier, 2008). Leadership is the critical factor in determining organizational excellence (Thomas George, 2005). Meanwhile specific statement on graduate employability according to The Ministry of Higher Education (MOHE), that is to produce competence graduates to fulfil national and international manpower needs of the graduates employed in their relevant fields within six months of their graduation. This the fourth objective of MOHE. Meanwhile results from 2008 tracer study done by MOHE out of 13002 first degree technical students 35.5% (4,616) were unemployed. Meanwhile out of 5,515 diploma technical graduates, 25.9% (1,428) were unemployed (MOHE, 2009). Universities should face the hard hitting truth, which is that they should always be competitive in facing any possibilities of change. Therefore, universities should adopt an open attitude to ensure competitiveness in effort to attain national goal of higher education in the future, by prioritising comprehensive curriculum planning (Morshidi Sirat, 2010).

People have been talking about leadership since the time of Plato. But in organizations all over the world-in dinosaur conglomerates and new economy start ups alike-the same complaints emerges: we don't have enough leadership (Robert A. Heifetz et al., 2011). We have to ask ourselves, why are we so obsessed with leadership? One answer is that is a crisis of belief in the modern world. Apart from the attainment of knowledge and skills it involves the inculcation of moral and ethical values and therefore too much emphasis on academic result without equal emphasis being given to other aspects of education such as ethics and morals may not achieve the desired objective of the creation of the rounded personality to make him the Malaysian that he must be. The objective of education may not be achieved the way it is envisaged to be. Malaysian engineering degree programmes must deliver the vision that engineers shall be technically competent and well-respected professionals spearheading technology and wealth creation (Megat Johari et al,. 2001), locally and globally. In the push for industrialisation, Malaysian needs competent engineers to perform the whole spectrum of engineering functions ranging from research and design to field services and shop floor activities. An engineer must not have a strong understanding of sciences and mathematics but also the necessary practical and application skills such as leadership skills (Ismail Hassan et al.,2005).

In Islamic worldview, sources of values come from the word of Allāh, Al-Qur'ān and the embodiment in the final Messenger of Allāh. (Muhammad SAW) As the final Messenger, his leadership transcends beyond cultures and races. His life provide a strong testimonial that is exemplary to all mankind. Muslims regard his example as the best example due to its comprehensive

in scope. Values embodied in the final Messenger integrate both material and spiritual aspects. The values are as follow (M Kamal Hassan, 2001).

1. Respect for knowledge, wisdom and truth
2. Spiritual purity
3. Piety and love of God
4. Fairness, justice and equity
5. Sincerity
6. Integrity, honesty and trustworthiness
7. Accountability to human and divine authority
8. Courage and humility
9. Comprehensive excellence
10. Selflessness
11. Professionalism and discipline
12. Cleanliness
13. Holistic Strength
14. Cooperation in all matters of mutual benefit
15. Beneficence

According to Kamal Hassan, these values are known as universal values accepted by all religion and we are also based al-Qur'ān and al-Hādith. In addition to the above factors, other vital factors that boost employers preferences are graduates have good and high moral values, good conduct, enhance company's good image, safeguard company's trade secret and generate profiles for the company(Saodah Wok et al., 2008).

3.0. Statement of the problem

In this borderless world, everyone must be equipped with the knowledge and skills to be globally competitive. Graduates must be confident, mobile multi-modal savvy, proficient in more than one language, be both "multilingual" and have multi-literacy skills and must function to globalised internationally accepted standards. However, in producing this kind of graduate, changes must be made in tertiary curriculum and there must be some improvements in the pedagogical approaches (Rafiah Salim, 2007).

With the increase in the total number of unemployed graduates, there are parties which blame the graduates and there are others who blame the universities for not developing a curriculum that meets employment needs (Morshidi Sirat, 2010). Malaysia experienced an increase in unemployment rate after the 1998 East Asia financial crisis. The unemployment problem was more acute among local graduates and the trend is persistent. Bank Negara Malaysia reported that there are 45,400 unemployed graduates or 0.1 percent of the total unemployed at the end of year 2002 are graduates. The figure accounted for 0.5 percent of the total labour force (Bank Negara Malaysia, 2003). The same phenomenon happened during the economic recession of 1985, reporting about the same

number of unemployed graduates. During that time, 94 percent of the unemployed public universities graduates were Malays. The general picture that emerged was that the unemployed were mostly female, Malays and Art and social sciences major.(Mohammad Haji Alias et al., 2007)

A study done by Suryati et al. (2003) found that there is a job mismatch in the Malaysian labour market between the years 1996 to 2000. There was a shortage of a labour in the production and agriculture sectors, where professional, technical and administrative workers were in excess supply. We concede that currently there is a large group of unemployed graduates. There have been reports on the issue of unemployment among graduates and much has been discussed by various parties. Universities have taken the best possible measures in preparing graduates by equipping them with knowledge as well as specific skills in their respective fields of study (Morshidi Sirat, 2010). Surprisingly the lack of soft skills seems to be a worldwide problem today. According to report by the BBC, four out of 10 large employers in the united Kingdom expect to struggle to fill graduate vacancies because of a shortage of applicants with the right skills (Che Norlia Hassan, 2007).

In short, the human resource development planner must be efficient in solving unemployment problems which are becoming serious, especially among the highly educated group. Graduates of digital age should have a positive attitude, especially towards their jobs and their future job environment. Academic qualifications alone will not guarantee the jobs that they desire.

4.0 The objectives of the study

The purpose of the study was to identify the engineering students on leadership skills and integrity at Malaysian Technical University.

1.   To determine the mastery level of soft skills element (leadership skills) and Islamic value among higher education students in Malaysia.

2.   To determine the correlation between soft skills (leadership skills) and Islamic value (integrity) among higher education students in Malaysia.

3.   To determine the differences between mastery of soft skills (leadership skills) and gender among higher education students in Malaysia.

5. 0 Population and Sampling

The sample groups are undergraduate students of Malaysian Technical University Network (MTUN) – Universiti Malaysia Pahang (UMP), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Tun Hussein Onn (UTHM) and Universiti Malaysia Perlis (UNiMAP). The number of respondents was 480 students distributed according to group and random sampling.

6.0 Survey Instrument

Section A consists of the demographic information of the respondents. Part B consists of ten items related to soft skills leadership) assessment tool and lastly, part C consists of 11 items related to Islamic values (integrity). Questionnaire used 5 points Likert scale in this study refer to 1= extremely disagree 2= Disagree 3= Unsure 4= Agree 5= Extremely Agree. The levels of correlation of the variables are measured according to the chart correlation obtained by using the formula Chua Yaw Piau Dr (2010).

7.0 Reliability

In order to determine the reliability of the instrument, the reliability test were used. Table 2 shows the reliability (Cronbach Alpha) of 10 items in the soft skills (leadership)and 11 items of Islamic values (Integrity) domain which has been tested.. Chua Yan Piaw Dr (2010) suggests a minimum value equal to 0.6. All variables used in this study showed Cronbach Aipha values more than 0.6 indicating that the chosen item are consistent and reliable.

Table 2: Reliability Test

Items	Cronbach Alpha
Leadership Skills	0.735
Integrity	0.906

8.0 Data collection

Questionnaires were sent to 480 respondents of UMP, UTeM, UTHM and UNiMAP starting on June 14, 2012. The acquired data was analysed using Statistical Package for Social Sciences (SPSS) version 19.0 for mean, standard deviation, one-way ANOVA and Pearson correlation.

9.0 Findings

Table 9.1: Interpretation of leadership skills

		B31	B32	B33	B34	B35	B36	B37	B38	B39	B40
N	Valid	480	480	480	480	480	480	480	480	480	480
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		4.27	4.31	4.32	4.37	4.39	4.30	4.24	4.20	4.36	4.46
Interpretation		**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Std. Deviation		.908	.784	.769	.750	.738	.784	.816	.823	.785	.709
Variance		.824	.615	.591	.563	.544	.615	.666	.678	.616	.503

The finding in table 9.1 showed the mean of the ten elements of mastery level of leadership skills possessed by students in Higher Education, the analysis showed that the item B10 "Leader should be

courage to take the risk" (M = 4.52, SD = .627) is the highest mean values. Leader should be courage to take the risk emphasized by the students has the highest mean indicating the item is one of the most important elements of leadership skills.

Table 9.2: Interpretation of Integrity values

		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
N	Valid	480	480	480	480	480	480	480	480	480	480	480
	Missing	0	0	0	0	0	0	0	0	0	0	0
Mean		4.06	4.17	4.25	4.29	4.19	4.20	4.29	4.24	4.20	4.28	4.17
Interpretation		**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Mode		4	4	4	4	4	4	4	4	4	4	4
Std. Deviation		.870	.769	.740	.716	.726	.722	.732	.765	.749	.740	.735
Variance		.757	.592	.548	.513	.527	.522	.536	.586	.561	.547	.540

The finding in table 9.2 showed the mean of the eleven elements of integrity values possessed by students in Higher Education, the analysis showed that the item C04 and C07 " (M = 4.29, SD = .716) and (M = 4.29, SD = .732)." do not abuse the power that belongs to being appointed to hold post"." Liable for offenses committed themselves and not blame others." Both the highest mean values

Table 9.3: Pearson Correlation leadership and integrity

		Leadership	Integrity
Leadership	Pearson Correlation	1	.664[**]
	Sig. (2-tailed)		.000
	N	480	480
integrity	Pearson Correlation	.664[**]	1
	Sig. (2-tailed)	.000	
	N	480	480

**. Correlation is significant at the 0.01 level (2-tailed).

A Pearson Correlation test result shown in table 9.3 shows there is significant correlation between leadership and integrity

Table 9.4: T-Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference

Leadership	Equal variances assumed	.595	.441	-1.024	478	.307	-.05762
	Equal variances not assumed			-1.026	477.915	.305	-.05762

A T-Test results shown in table 9.4 shows no significant difference between male and female students in mastering leadership skills.

10. Conclusion

Although the environment in the public and private sectors are different, leadership skills are essentially the same. It is only a matter of degree which skills are the more important in either of the two sectors. Leadership in the public service requires analytical and technical skills as well as the soft skills of empathy, caring, motivation and self-regulation.

In this study, the result showed that the level of mastering leadership skills and integrity among students at Technical University in Malaysia at a high level. It was also found that there is a significant correlation between leadership skills and integrity, and no significant differences between male and female in mastering leadership skills.

The findings help policy makers to design and review the curriculum in higher education institutions so as to incorporate the teaching of values in education. The findings could be used to determine the design of teaching methods, thus improving the promotion of the learning of values in higher education system.

Incorporation of values in the education system may help the current and future generation to develop clear life objective and play roles in promoting sustainable development. The ultimate aim is that graduates are equipped and substantiated with value systems which will subsequently be internalised and applied in their career and other undertakings. The learning of values is essential for the promotion of education for sustainable development (Saodah Wok et al., 2008).

Malaysian of Higher Education should be determined the differentiate between the employed and the unemployed over the years so that the problem of unemployment can be taken into consideration and strategic planning can be proposed to relevant authorities to response accordingly.

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