The Cultivation of Ethics and Morals Values among Malaysian University Students: A Case Study at a Malaysian Technical University

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Abstract: In line with the emphasis on developing first class human capital for the nation, professionalism and ethics have become one of the essential values to be developed among Malaysian undergraduate students. The development of these values among Malaysian students are considered as crucial for the development of the nation regardless whether they are part of the nation's workforce or entrepreneurs contributing to the economic development of the nation. This research investigated how ethics and moral values are embedded in engineering programmes offered by a Malaysian technical university. Specifically, the elements of ethics and moral values as well as the mechanism used by the university to inculcate the values of moral and ethics among its engineering students were investigated. Data were collected through survey questionnaires, interviews and observations involving 371 students and 16 lecturers. Three elements related to moral and ethics were identified, namely, the innovation, integrity and effort. Additionally, the mechanisms used to inculcate these values were lectures, tutorials and group projects. It was also found that the effectiveness of the inculcation of ethics and professionalism values through courses are based on knowledge, habits and attitude. Obstacles to the said purpose are also mentioned from the perspectives of lecturers and students. It can be concluded that these elements are prevalent in the engineering programmes and universities need to have effective strategies to ensure that engineering students are equipped with these values so that they can perform effectively as professional engineers as well as engineers entrepreneurs with strong moral values.

Key words: Ethics and morals values, cultivating, university subjects, teaching approaches, challenges

INTRODUCTION

The aspects of morals and ethics are closely linked to the development of a country. It is a common consensus today that incidents of moral decadency amongst professionals in this country, namely bribery and violation of power have become rampant. This will no doubt hinder the development of first class human resources. Additionally, besides building first-class work force for the nation, Malaysian government also recognizes the importance of cultivating entrepreneurs for the economic development of the nation. In this respect, entrepreneurs with strong moral values are crucial in order to overcome the problems such as a bribery which can disrupt the well-being of a nation as well as a positive economic growth of a nation. Therefore, it is imperative that serious countermeasures are taken to address this problem.

University students are considered as the asset of a nation as they will one day play effective role either by being part of the nation's workforce or part of the nation's income generators, namely as entrepreneurs. In this case, the government realises the importance of ethical and moral values in the education system as ingrained in the national education philosophy. It is an educational philosophy which stresses on a balance of the intellectual, emotional and physical aspects of humans in terms of manners and calibre. On that note, universities acting as agents of change in the society have to play their part not only in providing a higher education but also in inculcating high moral values especially to the university students.

The cultivation of ethics and moral values among Malaysian universities have long been implemented in the curriculum of the Malaysian higher education as has been imposed by the Ministry of Higher Education Malaysia (Radin, 2006). According to the policy of the Ministry of Higher Education Malaysia, seven elements of soft skills have been identified as the essential soft skills that need to be developed among Malaysian university students. These soft skills are communication skills, critical thinking and problem solving skills, team-work skills, lifelong

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learning and information management skills, entrepreneurship skills, ethics and integrity skills and leadership skills (Radin, 2006). In this respect, the researchers consider the ethics and moral values are related to the skills of ethics and integrity. To provide guidance for the universities to implement these skills in the curriculum a module for the development of these skills have also been developed and distributed to the universities throughout the country. Further, universities have been given the freedom to adopt their own strategies in integrating these soft skills in their university's curriculum. In this respect, they can either integrate the soft skills in the subjects they offer or initiate a subject that specifically caters the identified soft skills. The conduct of this research is driven by the interest to develop programmes which will enhance the development of ethics and morals among university students that are considered as the asset for the economic growth of the nation. This research aims to achieve four objectives which are firstly, it aims to identify the elements related to the values of morals and ethics embedded in the curriculum of a university in Malaysia. The second objective is to identify the mechanism to inculcate the values of morals and ethics in the university curriculum. The third objective is to determine the effectiveness of the courses in developing ethics and moral values among university students and finally, the fourth objective is to identify the problems or challenges for the integration of ethics and moral values in the courses offered to the university students.

Literature review: Dickinson (2000) in his research giving undergraduates managerial experience identified that most new applications that are needed in performing tasks at work can be learned by hard work and training from those who are more experienced in the field. In his research, he suggested that generic skills, the most basic model of learning as more important than specific knowledge on a certain work such as computer application. Besides, his research also explained the types of skills that employers want to see in a graduate's profile. Generally, the skills outlined are communication, problem solving, personal and interpersonal, responsibility and organizational ability. Dickinson's research compared between technical skills and generic skills. He focused more on the workplace than on the courses attended by workers when they were still students. Harvey (2001) in his research defining and measuring employability discovered that graduate employability can be defined by a number of aspects but mostly would relate to the possession of certain skills by a graduate and his capability in using it

for job hunting. Harvey says that a highly employable person is one who is highly motivated, confident, committed, adaptive and flexible. One must be able to work in groups, efficient in solving problems and making decisions a fluent communicator, innovative and can handle change. Besides, he must also be capable of expressing business appreciation, uses a customer-focused approach, committed towards high quality research, passionate to self develop and analytical towards approach used. In short, his research sought to determine the graduate employability factors needed before stepping into the working sector. Generic skills were only generally discussed and focus was not given on the development of the skills in undergraduate courses.

Liew Chei Siang and Wye Chung Khain conducted a research entitled student's perception on the importance of generic skills development: a case study at centre for economic studies, UKM on 80 final year students from the centre for economic studies, universiti Kebangsaan Malaysia. From the research, they discovered that the development index for all generic skills was recorded as lower than the importance index. It was identified that English oral communication skills is the generic skill with the lowest level of teaching effectiveness, followed by mastery of ICT and computer, risk and stress handling ability and creative and critical thinking skills. All in all, student's perception on the development and the importance of most generic skills do not significantly differ much according to their specialization and academic achievement. This implies that the students were aware of the importance of possessing generic skills but admitted that their mastery of the said skills are still low. This research suggested the use of Problem Based Learning (PBL) in classrooms to develop creative and innovative thinking so that students would not become just good 'exam machines'. This research was done only on the final year centre for economic studies students and does not represent the whole population of a learning institute. Therefore, it also does not provide the actual picture for all the courses offered at UKM.

Mohd (2005) in their research level of importance of computer skills according to types of jobs in Malaysia studied the level of importance of generic skills and computer skills according to types of jobs in Malaysia. The research surveyed employer's expectation towards employee's generic skills and computer skills that they need to master according to types of jobs. Total 217 company managers from various units and departments answered questionnaires distributed for data collection. Results discovered that the generic skills deemed

important by employers are team working, willingness to work hard, quick learning, communication, time management, problem solving ability, self motivation, analytical ability and able to operate computer applications such as HTML, SQL, visual basic, JAVA, Microsoft Access, C/C++, general and oracle. Obviously, this research only focused on generic and computer skills wanted by employers as research subjects. It was also done only on managers of certain companies and did not involve detailed scrutiny on courses offered at university.

Based on previous researches, it is known that quite a number of studies on generic skills have already been done locally and abroad. Most researches focused mainly on the possession of generic skills among graduates before they are accepted for work. Meanwhile, studies on employers looked at their expectation of generic skills that are needed in a graduate. Nevertheless, no research has focused specifically on the implementation of generic skills in courses offered at institutions of higher learning, especially UTeM. Some topics of interest here are to discover whether a clear-cut mechanism has been used in teaching and learning and to know whether its implementation has enabled the inculcation of ethical and moral values in students. Previous researches were not wide or focused enough on the questions asked in this research.

MATERIALS AND METHODS

The main objective of the study was to investigate the perceptions of the lecturers and students regarding the development of moral and ethics values embedded in the subjects offered at Malaysian university. This study is a case study contextualised within a Malaysian technical university. The university is a focused structured with five engineering faculties, one ICT faculty and one management faculty. The sample of this study is students enrolled in the engineering faculties and the subjects involved in this study are selected courses offered by the engineering faculties. To investigate the integration of moral and ethics values in the engineering programs, 16 subjects offered at a technical university, located in melaka were purposely selected. Specifically, eight subjects were categorised as core subjects while the other 8 subjects were categorised as the mainstream subjects. The core subjects are compulsory subjects for respective engineering programmes whereas the mainstream subjects are subjects compulsory for all students regardless of the programme they are pursuing. The list of the subjects involved in this research is shown in Table 1.

Table 1: Number of respondents according to courses

Course	Total	Percentage
Foundation English	23	6.5
Critical thinking	25	6.7
Philosophy of science and technology (Falsafah Sains Dan Teknologi)	23	6.2
Sepak takraw	25	7.0
Hockey (Hoki)	7	1.9
Entrepreneurship (Keusahawanan)	20	5.4
Journalism and publication (Penerbitan Dan Kewartawanan)	24	6.5
Drawing (Seni lukis)	25	6.7
Linear algebra (Al-Jabar linear)	25	6.2
Electric circuit 1 (Litar elektrik i)	25	6.7
Programming technique (Teknik Pengaturcaraan)	25	6.7
Engineering mathematics (Matematik Kejuruteraan)	25	6.7
Thermodynamics 1 (Termodinamik I)	25	6.7
Material science (Sains bahan)	25	6.7
Computer science mathematics 1 (Matematik Sains Komputer)	25	6.7
Engineering graphics (Grafik kejuruteraan)	24	6.5

Table 2: Cronbach's coefficient alpha correlation coefficients values

Variables	Coefficient	Values
Basic	until +1.00	0.00
Satisfied coefficients	until 0.70	0.60
Satisfied coefficients	until 0.80	0.70
Customary satisfied coefficients/acceptable reliability	until 0.90	0.80
Sufficient coefficients	until 0.95	0.90
Very good reliability	until +1.00	0.90
Acceptable standardized test for internal consistency	until +1.00	0.90
Acceptable standardized test for internal consistency	until +1.00	0.95

In this respect, data were collected through document analysis and survey questionnaire. The survey research utilised 2 sets of questionnaire: set A for the lecturers and set B for the students. Both set A and set B questionnaire contains 4 parts which are) the background of the respondents) the elements of ethics and morals embedded in the courses offered) the mechanism used in developing the ethics and morals of students from their courses and the) the problems faced in integrating the moral and ethic values. To measure their opinion, four level Likert scale was used for both sets of questionnaires, 1 = totally agree, 2 = agree, 3 = disagree, 4 = totally disagree. To ensure that the questionnaires are valid and reliable a pilot survey was carried out. It was also aimed at testing the reliability of the questionnaire crafted by the researcher. A combination of test-retest and equivalent-form reliability to determine the internal consistency correlation co-efficient of items (Gole and Thomas, 1982) was used for this purpose. The cronbach's coefficient alpha correlation coefficient values utilised in this research is presented in Table 2. The researchers used the Cronbach's coefficient alpha in measuring the

reliability of the questionnaire items. For that purpose, 10 lecturers and 20 students were involved in the pilot test. For set A (lecturer), questions in part B showed the cronbach alpha value of 0.98, part C 0.90 and part D 0.72. This means that the questions used in set A possessed high reliability. For set B, the Cronbach alpha values shown for the questions in part B was 0.93, part C 0.85, part D 0.83 and part E 0.78. The values also showed high reliability. Set A questionnaires were distributed to the lecturers teaching each of the 16 subjects. At the same time, each of them were given 25 copies of set B questionnaires to be distributed to the students in their respective classes, totalling 400 questionnaires to students. Total 100% responses were received from the lecturers while 92.75% (371) responses were received from the student's counterpart.

In addition, documents, namely the university's vision, mission, general educational objectives as well as the syllabus of the 16 subjects selected for this study were analysed in order to identify the ethics and moral values integrated in the respective subjects. Data were analysed based on simple statistical methods, mainly the average and frequency. The results of the data analysis are presented in the following study.

RESULTS AND DISCUSSION

This study presents the results of the research based on the 4 objectives stated earlier. Further, some recommendations were also given in the later part of the study.

The integration of ethics and moral values in the courses offered: As shown in Table 3 there were 16 elements of ethics and moral values embedded in the subjects offered. These elements are competency, innovation, creativity, cooperation, honesty, independence, respect, poise, punctuality, diligent, self effort, patience, self discipline, patriotism, self esteem and responsibility. Based on Table 3, the lecturers gave equal importance and ranked nine elements of ethics and morals as the most important. These elements were competency, cooperation, independence, punctuality, diligent, self effort, patience, self discipline and responsibility. Further, the second ranking are innovation and honesty. This is followed by creativity, respect and poise as the third ranking. The fourth ranking is patriotism and the lowest ranking is self-esteem. The lecturers seem to have common opinion regarding the elements embedded in the subjects. This result is inconclusive due to the limited number of lecturer respondents. Table 1 also presents student's perception of the ethics and moral values embedded in the subjects.

Table 3: The integration of ethics and moral values in the subjects in terms of percentage and ranking

Elements	Lecturers (n = 16)		Students (n = 371)	
	Percentage	Rank	Percentage	Rank
Competency	100.0	1	87.4	9
Innovation	93.8	2	90.3	3
Creativity	87.5	3	87.6	9
Cooperation	100.0	1	86.3	10
Honesty	93.8	2	83.6	12
Independence	100.0	1	89.3	5
Respect	87.5	3	88.4	8
Poise	87.5	3	90.1	4
Punctuality	100.0	1	81.1	13
Dilligent	100.0	1	89.2	6
Self effort	100.0	1	92.1	1
Patience	100.0	1	88.7	7
Self discipline	100.0	1	87.4	9
Patriotic	56.3	4	68.4	15
Self esteem	50.0	5	85.8	11
Responsibility	100.0	1	91.4	2

As shown in Table 1, self effort was ranked first followed by responsibility as the second, innovation as the third, poise as the fourth, independence as the fifth and patience as the seventh ranking. Meanwhile, the lowest ranking was patriotism followed by punctuality as the second lowest, honesty as the third lowest, self-esteem as the fourth lowest and cooperation as the fifth lowest ranking. Competency and creativity received equal emphasis which were ranked as the ninth place. It can be implied that students seem to have diversified ranking for the elements of ethics and morals embedded in the subjects.

Teaching and learning approaches used to embed ethics and morals in the subjects: Respondents were also requested to indicate the teaching and learning mechanism used to embed the ethics and morals in the subjects offered. Table 2 lists 12 teaching and learning used to cultivate moral and ethics values among students. These approaches are lecture, tutorial, consultation, quiz, paperwork, presentation, laboratory practical, group project, examination, class participation and case study.

Based on Table 4, lecturers ranked lecture and class participation as the most important, followed by consultation, tests and group project as the second ranking. There were three approach that falls under the third ranking which are quiz, presentation and examination and the fourth ranking is tutorial. Study research, case study and laboratory each received the lowest ranking respectively. Students rated lecture as the first ranking and tutorial as the second ranking. The third ranking is class participation followed by group project as the fourth ranking. Paperwork, test, quiz and examination are ranked as fifth, sixth, seventh and 8 ranking, respectively.

Table 4: The different perception of lectures and students regarding the teaching and learning approach to embed moral and ethics values

Teaching and learning approaches	Lecturers (n = 16)		Students (n = 371)	
	Percentage	Rank	Percentage	Rank
Lecture	100.0	1	90.8	1
Tutorial	81.3	4	88.4	2
Consultation	93.8	2	82.0	10
Test	93.8	2	85.8	6
Quiz	87.5	3	84.6	7
Paperwork	56.3	5	86.0	5
Presentation	87.5	3	78.9	11
Laboratory practical	37.6	7	83.8	9
Group project	93.8	2	87.4	6
Examination	87.5	3	84.1	8
Class participation	100.0	1	87.9	3
Case study	43.8	6	77.4	12

Table 5: The ranking of the developed values based on student's feedback

Statements	Rank (%)
Appreciating knowledge	88.7
Increasing appreciation of positive values	87.9
Completing tasks responsibly	87.6
Creativity in solving problems	87.3
Maintaining self-image	86.8
Discussing with lecturers/friends on ethical issues related to course taken	83.6
Understanding other's feelings	82.0
Being prejudice towards peers	62.3
Preferring to stay alone and not socialize	61.7

Finally, laboratory practical, consultation, presentation and case study are considered as among the lowest with ninth, tenth, eleventh and twelvth ranking. Both lecturers and students chose lectures, tutorials, assignment and group work as the main T and L mechanisms to inculcate ethics and morals values. They also agreed that case studies are unsuitable for this purpose.

The effectiveness of integrating moral and ethics values in the subjects: This research also investigated the effectiveness of developing moral and ethics values among students by integrating those values in the subjects taught. Student's feedback regarding their development of moral and ethics values was investigated based on nine statements listed in Table 5 shows the ranking of the developed values based on student's feedback. Based on Table 5, it shows that the first rank is appreciating knowledge and this is followed by the second and third ranking which are increased appreciation of positive values and complete task responsibly respectively. Next are values related to creativity in solving problems, maintaining self-image, discussing ethical issues related to subject taken and understanding other's feelings. As shown in Table 5, these statements were given percentages of >80, indicating their relative importance. On the other hand, only 2 statements were
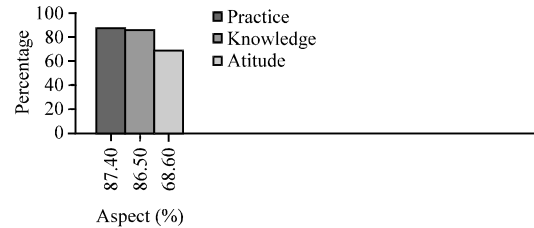

Fig. 1: The effects of integrating ethics and moral values

not considered important which are being prejudice towards peers and preferring to stay alone and not socialised. These 2 statements were given percentages that are below than 80% implying that these 2 statements do not contribute to the development of moral and ethics values.

The research also identified the effects according to three main aspects which are knowledge, practice and attitude. As shown in Fig. 1, the highest effects of integrating ethics and moral values in the subjects is on the aspect of practice (87.4%) and the second highest is the knowledge (86.5%) and the least effect is on attitude (68.6%). This statistics shows that the integration of ethics and moral values give the highest impact on the practice and knowledge but less impact on student's attitudes.

Obstacles in the inculcation of ethics and morals values in the subjects: This research also identified the challenges faced by both the lecturers and students in response to the integration of ethics and moral values in the university subjects. It was found that the lecturers (50%) faced more challenges than the students (43%), considering that it is the responsibility of the lecturers to find the most appropriate teaching techniques that can help students to develop the ethics and moral values.

Additionally, the problem faced by the lecturers based on ranking is firstly, students do not have enough access to references/materials/documents related to ethics and morals (68.8%). Secondly, the absence of clear-cut standards in measuring student's ethics and morals (68.8%) and thirdly is the lack of facilities to encourage the inculcation of ethics and moral among students (56.3%). Meanwhile, the problems faced by students based on ranking is firstly, the absence of clear-cut standards in measuring student's ethics and morals (56.4%), next, the courses taken emphasize more on technical aspects rather than ethics (52.6%) and finally, the lack of facilities to encourage the inculcation of ethics and morals among students (52.1%). In this case, the problems faced by both the lecturers and students are the absence of clear-cut standards in measuring student's ethics and moral values and lack of facilities to encourage the inculcation of ethics and moral values.

CONCLUSION

This research focused on the inculcation of ethics and morals in courses offered at a technical university. Therefore, the scope is limited to subjects in a technical university only and not in other public higher learning institutions in Malaysia. It is suggested that future researchers could widen their research to a number of higher learning institutions from each zone, namely the northern, central and southern zones. By widening the scope of this research, it is hoped that more input could be obtained in helping the Ministry of Higher Education (MOHE) in scrutinizing the importance of ethics and morals in the development of courses in public higher learning institutions.

This finding of this research is mainly based on 16 subjects offered to engineering students. These subjects were selected using the 'purposive random sampling'. Future researchers are hoped to include elective courses in the pilot study as they possess potential in harnessing positive values among students. Examples of these courses are french, mandarin and arabic languages.

The strengths identified within the elements of ethics and morals as well as the mechanism used in their inculcation in teaching and learning are hoped to serve as a guide for future research. Meanwhile, the obstacles faced by lecturers and students as discovered from this research should be addressed properly so as to ensure that the inculcation of ethics and morals can be continued and further enhanced for generations to come.

It can also be concluded that the inculcation of ethics and moral values among university students is crucial for the development of the well-being as well as the economy of the nation. These findings are consistent with the previous researches that highlight the need to integrate soft skills in the curriculum for the development of first class human capital. In this respect, the inculcation of ethics and morals among students through the subjects offered should be seen as a continuous effort in building the desired student's personalities. In this case, there are several actions that need to be taken to ensure the effective development of ethics and moral values among university students. The task of developing the ethics and moral values among students should not only be borned by the universities but it should also be taken by the Ministry of Higher Education (MOHE) and the Non-Governmental Organisations (NGO).

The introduction of generic skills module in all public higher learning institutions in Malaysia is surely a wise and noble move by the ministry of higher education. The implementation of this module in all public higher learning institutions is still in its early stage and so some unavoidable problems are expected. Hence, it is recommended that some measures should be taken by Ministry of Higher Educaiton (MOHE) to ensure the smoothness of this process. A national level research should be conducted to provide a significant yardstick in the effectiveness of the generic skills module among students. Improvements therefore, could be made to avoid the said problems from becoming more serious. The researcher suggests that public higher learning institutions must report the findings of their research to determine the strengths and weaknesses they possess in inculcating student's ethics and morals at their institutions. A curriculum review should also be seriously considered. This is to identify whether soft skills, especially the elements of ethics and morals really help in producing the kind of students desired by employers. A teaching and learning system that is based on lectures, examinations and industrial trainings can add value by encouraging students to forge relationships with the community. This gives them a chance to practise their social skills in the real context. Besides, continuous monitoring should also be done by MOHE on all public higher learning institutions to ensure that the generic skills module is closely and effectively followed.

This research has identified that another helping factor in the inculcation of ethics and morals among teenagers, especially students is the NGO. Organizations such as institut khalifah, DDR and IPTC should be given credit for their contribution in helping teenagers to build and rehabilitate their personalities. The researcher suggests that these NGO should work in synergy with the government to further enhance the development of ethics and morals among teenagers. Most programmes organized by these NGOs are carried out under their own platforms and tailored for personality development. These programmes could be perfected by having smart partnerships with government agencies such as the ministry of youth and sports, schools and other government bodies. Besides that, the modules prepared by the NGOs must also complement the National Education Philosophy (NEP). It is identified that most modules prepared focused on teenager's personality (akhlaq) development and rehabilitation. For the researcher, the NEP should be integrated and it should be the focus for each programme.

Nevertheless, the Islamic approach taken by some NGOs should be acknowledged and given credit. Besides the said approach, it is also suggested that the NGOs

should vary their approaches and methods in handling the moral issues of teenagers and students according to their expertise. Among others, the involvement of teenagers themselves as trainers or facilitators is recommended to bridge the gap between the target group and programme organizers. Through this, it is hoped that a more comfortable ambience could be created to facilitate communication between the "age gaps" without fear.

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