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AN ASSESSMENT OF LECTURERS ABILITY IN TRANSFERRING THE NECESSARY SKILLS IN CLASSROOM: THE COLLEGE OF TECHNOLOGICAL STUDIES, KUWAIT; AS A CASE STUDY.**Abstract:**

Recently, there is a considerable gap between what is learned in the classroom and the real life context of vocational and technical students' present and future workplace. This problem mostly occur in developing countries where lecturers in vocational and technical education have limited knowledge and experience of the real practice of industry and thus their experience is limited within the boundaries of their institutions. This paper examines whether lecturers take into consideration those skills mostly needed by industry in their classes. In other words, do lecturers know the skills needed for today's workplace? The study also examines the degree of industrialist's involvement with vocational and technical lecturers in determining the types of knowledge, skills and attitudes that need to be stressed in the classroom. The study would consist of: a review of the related literature; a questionnaire that would be distributed to a sample of lecturers at the College of Technological Studies; Personal interviews with the head of the department; dean of industrial liaison offices; and the department trainee's direct supervisors in local industry. This paper would conclude that lecturers must emphasize and develop the mostly needed knowledge, skills and attitudes by industries in their classes, otherwise industries would heavily depend on expatriates for years to come.

Keywords:

Vocational and technical education, Education and Industry, education and training

JEL Classification: A00, I29, I23

Introduction

Recently, industries and business spend billions of dollars every year to employ and train workers in order to increase profitability by reducing costs associated with training, profits, and production errors. (Ferguson 2007) In fact, the Partnership for 21st Century works in the USA is to promote institutions to incorporate 21st century knowledge, skills and attitudes in educational curricula. It stated: "In an economy driven by innovation and knowledge... in marketplaces engaged in intense competition and constant renewal...in a world of tremendous opportunities and risks...in a society facing complex business, political, scientific, technological, health and environmental challenges... and in diverse workplaces and communities that hinge on challenges... and in diverse workplaces and communities that hinge on collaborative relationships and social networking...the ingenuity, agility and skills of the United States people are crucial to U.S. competitiveness."(Partnership, 2008, p.1) Indeed, the success of an economy would depend extensively of the optimal utilization of its human resources, as the Economic and Social Research Council (2005) stated "Economic success is increasingly based on the effective utilization of intangible assets, such as knowledge, skills, and innovative potential as the key resource for competitive advantage". Therefore, vocational and technical education is in the forefronts in seeking new strategies and approaches to preparing the workforce of the future. Much of the vitality of vocational and technical institutions resides in the faculty and how she or he connects with their students. Faculty must have the opportunities to involve and enhance their teaching skills in their classrooms. New teaching strategies and methods should stress active questioning, activities that encourage cooperative learning, and real cases studies and solutions. However, there is a common believe that vocational and technical education is failing to respond to the need of business and industries and thus lack the skills needed in the world of work. Researchers in the field of vocational and technical education has expressed a serious concerned that there is indeed a obvious gap between what industrialist want and what the recipient of vocational and technical institutions expect. (Hanne man & Gardner 2010). This is due to many reasons, among which are: students are not fully aware of course objectives, students are not listening to their lecturer and advisor, lack of machines and tools in workshops, lack of participation in class exercises,

and ineffective appraisal scheme. Therefore, employers seem reluctant to hire vocational and technical graduates who lack certain skills. The Occupational Outlook Handbook, 2010, listed those skills mostly needed by employers, in order of importance, “communication skills, analytical skills, teamwork skills, technical skills (as related to major), and a strong work ethic”. (Koc & Koncz,2009) Among the skills mostly require by industries and business were professionalism, teamwork, oral communications, ethics and social responsibility. (Partnership for 21st century Skills, 2008,p.12) Another study, have also revealed that reading and writing skills is not enough for a worker to start a job rather that of critical thinking, communication, collaboration, and creativity.(AMA Survey, 2010, p.2).

In Kuwait, the Public Authority for Applied Education and Training (PAAE&T) has been established to respond to the urgent need for skilled and semi-skilled national labor. The PAAE&T consists of the College of Technological Studies, the College of Business Studies, the College of Business Education, the College of Health Service, the High Institute of Energy, the Sabah Al-Salem and Shweekh branches of the Industrial Training Institute, the Institute of Nursing, and the Higher Institute for Communications and Navigation. “The College of Technological Studies established an educational philosophy in order to achieve a strategic national objective; that is, to invest in Kuwaiti people in building a productive future for Kuwait. The role of the college is to design and offer study programs, to develop the graduate with executive capabilities and grant academic credentials from vocational licenses to scientific degrees”. (The PAAE&T main Website)In Kuwait, the need for skilled and semi-skilled national workers is the highest government priority in national human resource development. Expatriates form 69% of the total workforce. In fact, the World Bank report has classified Kuwait as having the fourth smallest ratio of national to expatriate workers in the world. However, Kuwait is currently one of the top countries in terms of financial transfer to expatriates’ countries of origin (AlRai Newspaper, Kuwait, 2010). The domination of expatriates is visible in most sectors, especially manufacturing, construction, transportation, storage, communications, financial insurance, real estate and business services. The variation of national labor and expatriates is also noted in occupational groups. In 2008,there were 22,825 non-Kuwaitis among medical and science technicians, compared to 7,028 Kuwaitis, 120,438 non-

Kuwaitis in the production sector, compared to 8,986 Kuwaitis and 24,313 non-Kuwaiti engineers, compared to 6,741 Kuwaitis (Ministry of Planning, Annual Statistical Abstract 2009).

Research Objectives

- a. To identify and examine lecturer's awareness of the type of knowledge, skills, and attitudes set in their course objectives.
- b. To identify and examine the methods used by lecturers in transferring the knowledge, skills, and attitudes to potential students.
- c. To measure student's perception and expectation of the standard of teaching, evaluation methods, and level of knowledge, skills, and attitudes acquisition.
- d. To measure students perception towards the effectiveness of industrial training programs.
- e. To measure industrial involvement in determining the require knowledge, skills and attitudes mostly needed by the recipients of the college's graduates.

The anticipated outcomes of this research would indeed help decision makers, particularly at the College of Technological Studies, in reforming a new strategy and plan that ensure the preparation of an appropriate learning environment for both students and lecturers. As well as, setting guidelines for both the College of Technological Studies and related industries in enhancing students knowledge, skills and attitudes that meet industrial present and future requirements

Research Methodology

The study would consist of: a review of the related literature; a questionnaire that would be distributed to a sample of lecturers at the College of Technological Studies (6 lecturers in each of the three departments chosen for the purpose of this study); Personal interviews with the heads of three departments (those

departments delaying with the oil sector and electricity power stations); dean of industrial liaison offices; and the department trainee's direct supervisors in local industry and electricity power stations. Research Sample: A stratified (6) lecturers sample would be chosen for the purpose of this research in each of the three selected departments. The selection of the departments would be based on that department serving the oil industry and electricity power stations due to their vital role in enhancing the country's economy. A personal in depth interview would be also conducted with the heads of the three selected departments, dean of the college, assistant academic affairs, head of the industrial training programs, and graduates direct supervisor in the industrial sector. The data collected would be analysed by using frequency and cross-tabulation (SPSSX) to answer the research objective raised.

Research Findings

The Characteristic of the Research Sample

A questionnaire was sent to a sample of 300 students in each of the three selected departments at the College of technological Studies, and 245 completed questionnaires were received. This represents 81.6% of the total sample. The percentage of male students was 65.8% compare to 34.2% female students. Kuwaiti students formed 94.5% of the total selected students.

In respect to instructor's sample, 6 lecturers were selected from each of the following departments: Manufacturing Engineering, Petroleum Engineering, and Electrical Engineering. All selected sample were male and 57% were Kuwaiti and 43% were non Kuwaitis. In respect to qualifications, 71% of selected sample hold Ph.D. degree, 5% hold Master degree, and 24% hold bachelors degree. In regards to teaching experience, 67% of the selected sample has more than 18 years teaching experience, 14% between 12-17 years, 14% between 6-11 years, 5% between 1-5 years of teaching experience. However, when asked to indicate number of years working in industry, 29% of the selected sample has no working experience, 14% has less than 1 year experience, 43%

have between 1-5 years working experience, 10% have between 6-11 years working experience, and 5% has more than 18 years of working experience.

Selected industrialists (3 students' direct supervisors) were also interviewed to establish their opinions on the quality of the graduates and the efficiency of the industrial training programs. The selected industries were in the Oil Sector (Kuwait Oil Company, Kuwait National Petroleum Company, and Petrochemical Industries Company).

Measuring student's perception towards lecturers competencies

An attempt has been made to identify and examine whether lecturers have emphasis on main academic issue such as: clarifying course objectives to students, defining evaluation system, encourage team work approach, enhancing student's communications skills. The results shown in table (1) below.

Table 1: Measuring lectures competencies

Elements	Agree	Disagree
Defining Course Objective	89	11
Defining Evaluation Methods	86	14
Encouraging Team Work	70	30
Encouraging Innovation Thinking	40	60
Enhancing Verbal Communication	74	26
Enhancing Writing Skills	79	21
Problem Solving	50	50

Methods		
Work Loyalty	66	34
Respecting Superior	55	45
Respecting Colleagues	92	8
Encouraging Work Accuracy	89	11
Work Confidentiality	75	25
Coping With Work Pressure	35	65
Health and safety Procedures	81	19
Respecting Work Time	35	65
Encouraging Work Initiative	76	24
Time Management	25	75
Applying Practical Cases	45	55
Participating in Problem Solving	76	24
Recognizing Students Differences	72	28

Inviting Lectures from Industry	20	80
Curriculum Development	55	45
Work Ethics	30	70

The above findings showed that lecturers have stress on some essential issue during the academic course and regrettably have ignored other main academic skills. Among the issues that lecturers have taking into consideration were: defining course objectives on the beginning of the course and that supported by 89% of the selected students, clarifying the evaluation system to students (86% agreed), encourage team work approach (70% agreed), enhancing writing skills (79% agreed), encourage work accuracy (89% agreed), recognizing students differences (72% agreed). On the other hand, the research revealed that there are other essential issues that have been either neglected or forgotten by lecturers. Among which were: encouraging innovation thinking (60% disagreed), problem solving skills (50% disagreed), respecting superior (45% disagreed), copying with work pressure (65% disagreed), time management (75% disagreed), applying practical cases (55% disagreed), inviting lecturers from industry (80% disagreed),, and work ethics (70% disagreed).

Measuring student's perception towards the standard of industrial training programs

An attempt has been made also to examine student's views towards the standard of industrial training programs in related industry. The findings are shown in table (2) below.

Table 2: Measuring students perception towards the standard of industrial training programs

Elements	Agree	Disagree
The suitability of duration of industrial training programs	80	20
The use of machines and tools	75	25
College Trainers competences	83	17
Industrial trainers competences	81	19
The availability of health and safety procedures	87	13
The availability of update machines and tools	77	23
Enriching students knowledge and skills	83	17
Acquiring skills in problem solving	75	25
Diversity in cases studies	83	17
The availability of work manuals	66	34
Stressing on work	75	25

ethics		
Enhancing writing skills	72	28
Suitability of evaluation system	81	19
Enhancing communication skills	79	21
Encouraging team work approach	83	17

The above findings showed that majority of students have "agreed" on all the issue raised regarding industrial training programs. For instance, students have agreed that industrial training programs have enrich student's knowledge and skills (83% of total students), contain different cases studies (83%), encourage team work approach, and indeed take into consideration health and safety procedures (87%).

5.4 Measuring lecturers perception towards the quality of teaching

An effort has been made to examine lecturer's opinions towards the quality of teaching. The findings are shown in table (3) below.

Table 3: Measuring lecturer's perception towards the quality of teaching

Elements	Yes	No
Clarifying course objectives to students	100	0
Course objectives are suitable to course contents	100	0
Course objectives meet industrial requirements	90	5

Whether industrialist participate in setting course objectives	80	20
Updating course objectives	87	13
The availability of update machines and tools	81	19
Defining skills require by industry	95	5
Whether course objectives require specific machines and tools	76	24
Whether machines and tools are available in the department	52	48
Defining the methods in transferring knowledge and skills to students	90	10
Ability in defining students needs	76	24
The use of different teaching methods	76	24
The use of real case studies	90	10

The use of proper evaluation method	81	19
Maintaining machines and tools	81	19
Ensuring healthy learning environment	100	0

The above finding indicated without any doubt that lecturers have taking positively into account those issues related in enhancing student's knowledge, skills and attitudes. For instance, lecturers have ensured that course are designed to meet industrialist requirements and thus specified the types of machines and tools require meeting such objectives. In addition, lecturers have taking into consideration student's differences and use several cases studies to raise the quality of learning. It is worth mentioning at this point that 80% of the selected lecturers have indicated that they have involved industrialist in determining and updating course objectives. Surprisingly enough, 52% of the selected lecturers have voiced complain that their department lacks recent machines and tools.

5.5 Measuring the types of skills that have been transferred to students

An effort has been made to examine lecturer's opinions towards the types of skills mostly transferred to students in classroom. First, lecturers were asked to indicate whether course objectives have included specific skills. The findings are shown in table (4) below. Secondly, lecturers where also questioned whether they have stress on specific skills in classroom and the results presented in Table (5).

Table 4: Types of skills included in course objectives

Elements	Yes	No
Communications skills	75	25
Analysis skills	80	20

Team work approach	95	5
Technical skills	95	5
Ethical skills	100	0
Work commitment	100	5
Writing skills	65	35
Creative thinking	62	38

Lecturers were found keen in including specific skills in course contents that are meeting industrial requirements. Among which were ethical skills, work commitment, team work approach, and ethical skills. As a result, lecturers ensured to transfer various skills in classroom which were considered significant in upgrading the quality of graduates. Table (6) shows the skills that lecturers transferred to students in classroom and thus have been confirmed by the majority of the selected lecturers.

Table 5: Types of skills stressed in classroom

Elements	Yes	No
Communications skills	81	19
Problem solving techniques	100	0
Team work approach	100	0
Technical skills	67	34
Ethical skills	100	0
Work Accuracy	100	5
Writing skills	85	10

Creative thinking	90	10
Time management	100	0
Listening skills	71	29
Respecting Collogues	75	25
Work confidentiality	90	10
Health & safety procedures	85	15
Follow Rules	80	20
Work loyalty	70	30
Work Excellence	100	0
Respecting superior	90	10

Measuring industrial perception towards the quality of graduates

In the oil sector, an interview have been made with four senior supervisors in different departments, who rate graduates work commitment are "good" as far as there is a penalty imposed on those who fail to attend work on time. In respect to work initiative, all supervisor stresses on the need to push graduates to complete the work assigned and ensure such allocated task finished on time. Graduates were also found, in some cases, to either forget or ignore order from their direct supervisor, especially if his direct supervisor is not Kuwaiti nationality. Surprisingly enough, all direct supervisors notice the lack of level of knowledge and skills for those graduates from the College of Technological Studies. This was also worsening by the unfamiliarity of graduates with the type of machines and tools used in oil industry. Selected direct supervisor gave a "negative" answer toward whether if they have collaboration with the College of technological Studies. In fact, they seem eager to provide assistant to the college management and staff, however, they feel that they have been either forgotten and/or

ignored. It is worth mentioning at this point, that graduates direct supervisor in a strong favor of employing non Kuwaiti manpower and thus not supporting to some extent the concept of relying on Kuwaiti manpower.

In respect to measuring the perception of graduates direct supervisors in the Ministry of Electricity and water. Interviews with six graduate's direct supervisor were conducted in Doha Power Station and Al-Zoor Power Station. All interview graduates direct supervisor rate graduates attendance at work on time as "good". When asked to rate graduates work initiative graduates direct supervisors were vary in their answers. Only two graduates supervisor who rated as "very good", compared to four supervisors who have rated as "good". Despite such rating, all supervisors agreed that graduates must by encourage and in most cases forced to complete the work assigned by themselves without the interference from the direct supervisors. In respect to obeying direct supervisors orders all selected supervisors gave rated "good". Graduates seem to follow well health and safety procedures and thus rated "very good". Surprisingly enough, all selected supervisor have rated the level of graduates knowledge and skills in their field as "very poor". Selected supervisors stress to the need that graduates must absorb the concept of respecting and liking the type of work that they performing. They added "graduates dislike the type of work and must be trained on how to cope with working with machines and tools and expose to high temperatures". Again, selected supervisors found rejecting the idea of replacing Kuwaiti for non-Kuwaitis in such vital sector. They all agree that the majority (90%) of graduates dislike the type of work, but also unable to show a sincere willingness to continuing working for long period in such type of work.

In respect to collaborations with the College of Technological Studies, all selected supervisors have indicated that they have no contact with the College of technological Studies. In fact as one of the interviewed supervisor stated "we hope to have some sort of contact with the College so that we can work together to improve the standard of graduates. We received graduates not only lack the necessary knowledge, but also with little or no skill to deal with related machines and tools that suppose to be trained for in his college".

Conclusions

Lecturers seemed to stress on some essential issues related to course contents and may forget or ignore other significant issues, especially those skills related in enhancing students skills that mostly needed by industry. For example, the lack of recent machines and tools would indeed poses a threat to the quality of the graduates from college of technical studies. This was confirmed by more than a half of the selected lecturers and students. In fact, another problem was the availability of the right number of machines and tools that match the number of students in either workshops or laboratories. Such inconvenient situation would indeed hinder the transformation of the needed skills to students. On the other hand, it seems that lecturers are well aware of the need to include significant skills in course objectives such as communications skills, technical skills and ethical skills which would be expected to reflect on the behavior of those students working in a specific industry. The management of the college of technical studies must keep close contact with related industry so that can obtain its setting objectives. Winding the gab with crucial industry such as the oil industry and ministry of electricity and water would force such industry to rely on expatriates for years to come.

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