

ORIGINAL ARTICLE

Implementing Quality Assurance in Vocational Education, Requirements & Obstacles: The College of Technological Studies, Kuwait, As A Case Study

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ABSTRACT

Vocational and technical education is concerned with preparing students for the world of work. The rapid change in society and transformation towards post industrialism present a significant challenge on vocational and technical education programs. Vocational and technical institutions must focus on building a reputation for enhancing student's capabilities for a specific job. On the other hand, industries would employ graduates that have specific level of knowledge, skills and attitudes for specialised field. As a result, vocational and technical institutions have to develop student's competencies that respond directly to the need of industry. Quality assurance refer to the characteristics of the programs that ensure proper learning programs that meet the criteria's set by the providers of vocational graduates. It can be described as a set of principles, code of conducts, methods of assessment and set of criteria's that assure quality in vocational education on provider level. Quality in vocational education is essential in improving the learning environments, enhancing student's capabilities, job prospects and meeting socio-economic goals. This paper would focus on the concept and importance of quality assurance in vocational and technical education with particular attention to the College of technological Studies, CTS. The paper would discuss the validity, requirements and obstacles that might hinder the implementation of quality assurance in the CTS. The paper would be based on field work that would encompass a review of the related literature, questionnaires and personal interviews with the college deans, selected heads of academic departments, and staff. The outcomes of this research would propose the requirements and methodology to implement quality assurance in the CTS. The paper would conclude that unless the management of the CTS realised and appreciate the concept and application of quality assurance, industries would continue to rely on expatriate for years ahead.

Keywords: *Vocational and technical Education, work quality assurance, developing Indigenous Manpower, Interaction between vocational and technical education and local industries and business, Kuwait.*

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INTRODUCTION

Vocational and technical education can be simply described as "education for work". It focus on providing students with the require knowledge and skills that can be successfully transfer to workplace. In other word, it is that education which concentrates on training students for a specific filed of specialisation in the world of work. Vocational Education and Training can be refers to "education and training that focuses on delivering skills and knowledge required for specific industries. It is a learning option for young people in the senior phase of learning". (The State of Queensland, 2016) Thus, it is completely different from formal education, since the focus on providing students with the right level of knowledge,

skills and attitudes that meet industrial requirements. This would imply that vocational and technical practitioners must have a philosophy that form as guidelines to assess in obtaining the require objectives. A philosophy that supports the initiation of team work approach in preparing a suitable learning environment that would enhance student's capabilities. "Education-for-work needs to adopt or develop well-defined philosophic principles that will guide, support, or create practice in changing workplaces. In order to meet the needs of the workplace of today and the future, education-for-work practitioners must be aware of the philosophies that promote both technical-vocational needs and personal development". (UNESCO, 2010, p.1). However, many criticisms have been voiced regarding the quality of vocational and technical graduates. "In many countries, a key challenge is about opening up for women who are traditionally marginalized in the labor market and for the huge numbers of young people who lack foundations skills or have completed basic education and yet have few prospects of decent work" (UNESCO, 2015, p.13). The Chronicle of Higher Education, 2011, indicated that employers stress on enhancing vocational education graduates since they lack the necessary skills for the job. Jideani and Jideani (2012) emphasis that the success of education must not be measured by what student can remember, but rather what he/she able to do with the acquired knowledge. More than 42 percent of employers agree that new entrants to the jobs with only a high school diploma or GED equivalency are "deficient" in their skills and work readiness". (Society for Human Resource Management, 2006, p.10). Employers and key figures in education urging schools and colleges to develop 21st century skills, such innovated thinking, problem solving, work ethics, communication skills, team work, and self management. (The III-Prepared U.S. Workforce, 2009). Vocational and technical education cannot be productive unless there is an appreciation for quality assurance. In the related literature, there is no simple definition of quality in vocational education. The term quality is "an intrinsic characteristic of training delivery, that is, one that is difficult to observe", (Department of Education and Training, 2015, p.4), "it is innate and not measurable", (Margareta Nikolovsks, 2014, p.36) and "...there has been debate for the past 10 to 15 years over the meaning of the word", (Maria Emilia Gavao, 2014, p.6). There is an increase interest in quality assurance in vocational education by industrialist, educators, and economies. It has been contributed positively in improving the learning environment, achieving transparency, maintaining better interaction between vocational institutions and industries, and enhancing training programs. Quality assurance can be defined as "a program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met". (Merriam-Webster's unabridged Dictionary, 1828). Quality assurance is considered as the first step in improving training system that would enhance student's capabilities and raise employer's confidence in the quality of training that meet industrial requirements. (Hon. Steve Herbert MP, 2015) Another view, stress on the contribution of quality assurance in improving the learning outcomes that service the interest of each society. (Onyesom and Ashibogwu, 2013). Thus, quality assurance is a learning programme of its provider, through which the expectation of the beneficiaries is met and the quality standards are obtained. Quality assurance enhanced the learning outcomes (knowledge, skills and competence) that meet essential stakeholders' expectations (students, parents, employers and society). Yet, quality assurance framework consists of principles, methodologies, measures and instruments. (Ministry of Education, Research and Youth, 2007). In respect to quality assurance principles, the European Common Quality Assurance Framework has agreed on four main elements. They are namely: Methodology, Planning, Implementation, Evaluation and Revision. This would imply conducting an internal assessment from the provider's side which includes: Planning, Internal Monitoring, Self Assessment, Improving Plan and developing the Quality manual. On the other hand, the provider's external process would include external monitoring of technical and vocational education and training, validation of technical and vocational education and training providers self assessment report and approval. (Ministry of Education, Research and Youth, 2007)

In this respect, quality assurance indicators have been emerged to assess in the evaluation of the achievement of the setting objectives. Indicators can be defined as "'shortcuts', 'abbreviations', or 'substitutes' of an underlying reality. They are calculated from raw data using statistical tools such as percentages, rates, ratios, and indices". (Michaela Martin and Claude Sauvageot, 2011, p.28). In other word, quality assurance indicators would to some extent, indicate whether students have obtained the necessary knowledge, skills and competence needed by industry. Quality assurance indicators are not limited in evaluating the external institutions status, but also internal monitoring of the departmental progress in achieving their goals. However, it is worth mentioning that the validity of indicators would depend on the accuracy and flow of information related to a particular indicator. In addition to, the reliability of the objectives encompass in the plan. Quality assurance indicators can be classified by resources (funding and staff), activities, and results. (Michaela Martin and Claude Sauvageot, 2011). Also, it can be classified as finance, access (opportunities, participation, and transition), quality and innovation

and relevance. (UNESCO, 2012). In summary, the main objective of quality assurance is to provide a deep examination of the status of vocational and technical education, monitoring student's learning progress, measuring the impact of vocational and technical education on the community and the whole country. 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 labour. 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 outcomes of this research would assist decision makers in the CTS in developing an appropriate quality assurance system that would improve the status of vocational and technical education, enhancing students capabilities, making the best utilisation of the available resources, strengthening linkage with industries, reducing dependence on expatriates and achieving economical goals.

Research Objectives:

- a. To measure management and staff awareness towards quality assurance in vocational and technical education.
- b. To identify and examine quality assurance requirements in the CTS.
- c. To identify and examine the process for the establishment of quality assurance in the CTS.
- d. To identify and examine the method for creating departmental quality assurance indicators.
- e. To identify and examine those obstacles (if any) that might hinder the establishment of quality assurance system.

It is expected that the outcome of this Research would encourage the College of Technological Studies management to ensure higher quality in their learning programs. It will meet the expectations of students, faculty, staff and the society. This fully equipped industry will be able to adapt, manage and maintain the imported technology to suit local requirements. In addition, it enhances indigenous capabilities and reduces dependence on expatriates. Otherwise, the country would be depending on expatriates for unlimited years.

How quality assurance system benefit the College of Technological Studies?

- Creating general awareness of the importance of quality assurance system.
- Meeting student's expectation by ensuring high quality of learning, designs a curriculum that is focus on industrial needs, and the use of advanced teaching and evaluation techniques.
- Improving the standard of industrial training programs and enhancing the assessment methods that could meet the industrial expectations.
- Providing knowledge, skills and attitude that meet industrial expectations. This would support expanding career opportunities for future graduates.
- Enhancing staff competencies and flexible interchanging of staff between the CTS and related industries. This interaction would increase staff technical expertise and encourage the application of latest techniques in teaching and evaluation techniques.
- Enhancing the reputation of the CTS and encouraging more potential students to enrol in different specialisations.
- Strengthening collaboration with industries and enhancing industrial confident in the standard of the CTS's graduates.
- Improving society image regarding the standard of the CTS graduates and their competencies. In addition to, providing society with various training programs that can overall improve the standard of living.

RESEARCH METHODOLOGY

Design

This research consists of a descriptive survey designed to identify and examine the implementation of quality assurance in the academic departments at the College of Technological Studies. The research would focus on the requirements as well as the obstacles that may hinder the implementation of quality assurance.

Sample

The research would encompass personal interviews with (9) heads of departments in the College of technological Studies. They are namely, Manufacturing Engineering, Electrical Engineering, Petroleum Engineering, Civil Engineering, Electronics Engineering, Chemical Engineering, Automotive and Marine Engineering, Mechanical Power and Refrigeration Technology, and Laboratory Technology. In addition, a questionnaire would be designed, tested and distributed to selected staff (6 lecturers) in each of the nine

selected departments. Several issues would be investigated and discussed. Among which: measuring awareness towards quality assurance and its importance, the availability and departmental plan, knowledge about indicators and methods of measurements, requirements for implementing departmental quality assurance, the availability of resources needed for the implementation of quality assurance, management style and its effect on encouraging the application of quality assurance, and those obstacles that might delay or hinder the formation of quality assurance. Personal interviews would be also conducted with the dean of the CTS, assistant academic affairs, and head of industrial training programs. Among the issues to be investigated are the validity and efficiency of the implementation of quality assurance and the resources needed to maintain high standard of learning.

Instrumentation

The target population for this research consists of selected heads of academic departments and lecturers at the CTS (holding a PhD degree or less).

Statistics and Parameters

The statistics pertain to the **sample**. The parameters pertain to an entire population.

The research parameters are as follows:

- (a) Selected heads of department as well as lecturers at the CTS.
- (b) The dean of the CTS, the assistant of academic affairs, and the head of the industrial training programs.

The research sample is as follows:

- (a) Nine heads of academic departments and (6) selected staff from each of the nine selected academic departments.
- (b) The dean of the CTS, the assistant of academic affairs, and the head of the industrial training programs.

REASULT AND DISCUSSION

The Characteristic of the Research Sample

In respect to instructor's sample, 6 lecturers were selected from each of the following departments: Electronic and Computer Engineering Technology, Petroleum Engineering Technology, Manufacturing Engineering Technology, Chemical Engineering Technology, Civil Engineering Technology, Electrical Engineering technology, Automotive and Marine Engineering Technology, Mechanical Power and Refrigeration Technology, and Laboratory Technology.

All selected sample were male and 65% were Kuwaiti and 35% were non Kuwaitis. In respect to qualifications, 70% of selected sample hold Ph.D. degree, 20% hold Master degree, and 10% hold bachelor's degree. In regards to teaching experience, 55% of the selected sample have more than 18 years of teaching experience, 20% between 12-17 years, 15% between 6-11 years, 10% between 1-5 years of teaching experience.

Measuring awareness towards quality assurance in vocational and technical education.

An attempt has been made to identify whether the management of the College of technological Studies are aware of the concept and importance of quality assurance. As a result a personal interview has been made with the college dean and with the assistant academic dean who both show full awareness of the concept of quality assurance. In fact, an effort was exerted by the dean of the college to form committees to ensure obtaining an academic recognition and accreditation from reputable institutions. As a result, academic departments are working in reviewing and evaluating their standard (academic and managerial) to fulfil the requirement for obtaining an international accreditation. However, in respect to the sample concerning the heads of academic departments, 75% of the total selected indicated in a personal interview that they are unaware of those information related to quality assurance system. When asked to indicate whether quality assurance system would enhance the performance of their department 80% gave a positive answer "yes", and 20% were "not sure". Heads of departments voice a concern regarding sincere efforts from the college management in applying quality assurance system in their department in specific and in the college in general and this was supported by 65% of the selected heads of departments. Despite the importance of quality assurance system, only 25% of the selected heads of departments consider applying quality assurance in their departmental plan. When asked to indicate the awareness of those criteria's related to quality assurance only 35% of the total sample gave a positive answer "yes". However, it is worth mentioning that 70% of the selected heads of departments admit that they are unable to apply quality assurance system due to the lack of essential and basic requirements (e.g. lack of trainers in workshops and laboratories, lack of qualified departmental secretary, lack of updated

curriculum). Surprisingly enough, when asked whether the management of the college is dedicated efforts in applying quality assurance system, 70% of the selected sample gave a negative answer "no". Indeed all selected sample confirmed that quality assurance system would enhance the quality of curriculum, upgrade the standard of the college graduates and strengthening interaction with industry.

An attempt was also made to measure lecturers' awareness towards quality assurance system. The research revealed that only 55% of the selected lecturers are aware of those information related to quality assurance system. There is a common believe that quality assurance would enhance the performance of their departments as well enhance the quality of learning. However, 85% of the selected lecturers confirmed that the lack of resources needed to apply quality assurance system in their department. Therefore, quality assurance criteria's were absent in their departmental plan.

To identify and examine quality assurance requirements in the CTS.

There are many factors that have to be considered when discussing the issue of quality assurance requirements. Among which are:

- Management Awareness. In vocational and technical institutions, management style would indeed have an influential effect on the quality of learning. In other word, management style would determine the scope of success in implementing quality assurance as well as the level of interaction with local industry. Managing a vocational and technical institution is different from managing an academic institution. The ability of the head of vocational and technical institution in setting an appropriate and efficient plan that encourage staff (academic and managerial) in achieving those objectives related to quality assurance is considered highly significant.

- Human and Financial Resources. Quality assurance system requires human and financial resources to achieve positive outcomes. The formation of team works and committees within the related academic departments is thought essential in such process. The documentation and assessment of the current and future prospect of vocational and technical education need appropriate financial resources. In fact, updating curriculum, training lecturers, improving learning in workshops and laboratories, implementing health and safety regulation are some of the factors that would be address by those conducting quality assurance system. Thus, in order to meet acceptable standards in such factors internal and external resources have to be allocated.

- Acquiring the Know-how and Why. Considering quality assurance system means that all staff (academic and managerial) must obtain the knowledge and skills needed to gain fruitful outcomes. A positive attitude is also highly recommended and must be injected to facilitate the implementation and assessment of quality assurance system. Therefore, staff must enrol in extensive training programs that allow a free exchange of knowledge, skills and attitudes. A sharing experience with other similar institutions would

indeed enrich staff acquisition and would also increase the level of staff confidence.

- Society Support. Graduates from vocational and technical education, normally perceived from society as a second class education. In fact, society would consider vocational and technical institutions as a "back" gate of the university. In other word, who fail to enrol in a university would be directed to enrol in vocation and technical institution. Thus, it is essential to change society view towards those who attend vocational and technical education through various communication channels (e.g. seminars, meetings, lectures, television, and radio).

To identify and examine the process for the establishment of quality assurance in the CTS.

The process of establishing quality assurance system may take the following steps:

- Creating General Awareness. This means that the management of the College of Technological Studies has to ensure that all staff (academic and managerial) aware of all aspect related to quality assurance system. This can be accomplished through various means of communication such as: meetings, lectures, seminars, inviting external speakers.

- Forming Quality Assurance Team. It is essential to select those staffs that show an interest in improving the quality of learning and have knowledge and/or experience in the formation and application of quality assurance system in vocational and technical institution. A financial incentive must be allocated so that to ensure the continuation of forming quality assurance system.

- An Assessment of the Current Status. An internal approach to SWOT analysis is significant to determine the college strength, weakness, opportunities and threats. Among the factors that need to be address are: the financial capability of the college, the level of interaction with local industry, quality of graduates, staff competencies, standard of workshops and laboratories, health and safety regulation, relevance of curriculum to local industry needs, teaching methods and assessment, industrial perception towards the quality of graduates.

- Setting Quality Assurance System Plan. The management has to set an appropriate plan that deal with all elements related to the implementation of quality assurance system. The plan has to include general and specific objectives. An action plan that shows the procedures and times timetable for implanting each objective is then applied. It is worth mentioning that the objectives have to be realistic, measurable, and within the available resources. A constant monitoring and assessment of the implementation of objectives is crucial to tackle any obstacle. The participation of concern industries in the setting of the college plan would eliminate or reduce unqualified graduates.
- Measuring Plan Performance. A separate committee has to be formed to monitored and measure the process of the implementation of quality assurance plan. Any divination in the plan must be reported and correction action has to be applied.
- Re-Assessment of the Current Status. This would enable the management of the College of Technological Studies to compare the standard of all elements related to quality assurance system before and after implementation of the plan.

To identify and examine the method for creating departmental quality assurance indicators.

Providers of vocational and technical education normally set indicators in order to measure the outcomes of quality assurance system. In other word, to evaluate the standard of learning, teaching methods, curriculum development, lecturers competencies, standard of workshops and laboratories, and quality of graduates. Several authors have discussed quality assurance indicators (Chalmers, 2008, European Training Foundation 2014, p.11). Since vocational and technical education has unique characteristics, the participation local industry is thought significant. This means that the setting of indicators must be jointly between the suppliers of vocational and technical education and the recipients of graduates. Therefore, a face to face meeting between the heads of department at the College of Technological Studies and graduates direct supervisors in local industry is highly recommended. Both parties (supplier and recipient) have to determine key indicators. Among which are: number of students enrol in each department, passing grade required to enrol in the college, level of knowledge, skills and attitudes that has be embodied in the curriculum, teaching methods and assessment, standards of workshops and laboratories, health and safety apparatus and regulation, duration and quality of industrial training programs, and graduation requirements.

To identify and examine those obstacles (if any) that might hinder the establishment of quality assurance system.

An attempt was made to examine those obstacles (if any) confronting the management of the College of Technological Studies in forging a quality assurance system. It seems that the financial aspect is not one of the obstacles, it is rather that acceptance of the notion of quality assurance and the sincerity of its application in the college practise. In other word, differentiate has to be made between lecturers' acceptance of the application of quality assurance and the real dedication of the college management in transforming such acceptance into reality. Lecturers were found eager in improving the standard of learning and interaction with industry. As well as improving the college image through the implementation of quality assurance system. There a common agreement that such system would enhance the quality of the college graduates.

SUMMARY AND CONCLUSION

Kuwait as many of the Gulf States, the issue of developing human capabilities is one of the most concern issues in the national overall development plan. Therefore, attention was dedicated on building an indigenous capability that able to manage, maintain and adapt the imported technology in various industries. Vocational and technical education institutions were look upon as the appropriate solution for the lack of local indigenous skilled manpower. Vocational and technical education would focus on providing students with the most needed knowledge, skills and attitudes that meet the industrial requirements. This would contribute significantly in reducing dependence on expatriates. Thus, it is essential to stress on the need of clear and realistic ideology for both the provider of vocational education and the recipient of vocational graduates. This ideology would encourage a close interaction between both parties (suppliers and recipients) to ensure the proper implementation of quality assurance. Vocational education providers are responsible for a self-evaluation for internal and external resources. As respect to the College of technological Studies, it is a management responsibility to set objectives with concerned academic and managerial departments and to ensure meeting those objectives within the setting criteria's. A joint committee is highly recommended in the assessment of teacher's capabilities in delivering the required knowledge, skills and attitudes mostly needed by industry. The form of student's test is though essential in ensuring meeting the setting objectives by both parties. This would assess in

determining the appropriate teaching methods that would meet the criteria's embodied in the quality assurance scheme.

Quality assurance in vocational education would ensure that student's qualifications have met the standard of not only vocational and technical institution, but also institutional requirements. Vocational and technical education is not only limited in the acquisition of knowledge, skills and attitudes that meet industrial standards, but also in the development of national socio-economic and the improving the quality of life. Therefore, quality assurance in vocational and technical education focus on maintaining quality in learning through extensive auditing of all factors related the acquisition on the right competencies that meet industrial demand. However, quality assurance must also meet the objectives set by both parties (supplier and recipients') of vocational graduates, as well as the national overall manpower objectives. The success of quality assurance would depend on several factors. Among which, from vocational and technical institutions perspective are: the philosophy adapted in relation to industrial interaction with related industry, lecturers who must meet the teaching criteria set in the plan, the curriculum that respond to the rapid change in science and technology, teaching methods that apply real cases and solve specific industrial problems, as assessment scheme that focus on the ability of graduates to handle work challenges, the standard of workshops and laboratories that equipped with recent machines and tools with the application of proper health and safety procedures, the efficiency of industrial training programs "sandwich course", and the quality of joint research and seminars that tackle issues related to the quality of learning. On the other hand, from industrial perspective, among the issues needs to addressed are: the degree of industrialist's involvement in setting vocational education plan, industrialist's participation in vocational education activities (e.g. teaching, training, research and development, seminars), and assessments of graduate competencies. Therefore, the College of technological Studies has to adapt and implement a proper quality assurance scheme that would contribute positively in enhancing the quality of learning. Interaction with related industry is significant in the setting and evaluating of quality assurance system, so that to maintain a high standard of graduates. Otherwise, the country would continue depend on expatriates for years ahead.

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