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A Model for Reconstruction the Management Philosophy, Practice, and Organization Structure in Technical and Vocational: The Public Authority for Applied Education and Training, Kuwait

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Abstract. The success of technical and vocational education would depend on several factors among which are: the quality of management, the management adopted philosophy, the organization structure, the quality of workshops and laboratories, the competencies of academic and managerial staff, the level of interactions with related industries, health and safety codes and conducts, and the quality of high school graduates who are interested in joining technical and vocational institutions. However, the quality of management is considered the main dominate in the success or failure of technical and vocational education in producing graduates with the require knowledge, skills, and attitude that are mostly needed by industries. In other word, it is the mentality, philosophy, and practice that is being adopted by the management of technical and vocational education that would determine the quality of the outcomes which would consequently contributes in the reduction of the level of dependence on expatriates particularly in essential sectors of the Kuwaiti economy (e.g., oil, electricity and water, health sector, communications, and navigations). In this paper, a model is introduced to reconstruct the management philosophy, practice, and organization structure at the Public Authority for Applied Education and Training, PAAE&T, Kuwait. The aim is to tackle the weakness of the present management philosophy, practice, and organization structure and proposed instead an effective and efficient management philosophy, practice and organization structure that would enhance the quality of technical and vocational graduates. The outcomes of this paper would significantly contribute in creating a general awareness of the real notion and application of technical and vocational education and the requirements that would, without any doubt, allows a better and efficient utilization of human and material resources in achieving the overall country's manpower plan.

Keywords. Technical and Vocational education, Organization Structure, Developing Indigenous Manpower, Interaction between Technical and Vocational Education and Local Industries, Kuwait

1. Introduction

The organization structure is not only a drawing that shows the flow of commands, departmental sections and units, lines of communications, and the distributions and scopes of organizational specialization. It is rather a transformation of the management philosophy thoughts and believes in maintaining a high standard of outcomes. An organization is a collection of resources that are working as a team to achieve a common objective(s) (Carter, 2022), contain of elements, relations between elements and structure of relations as a majority composing a unit (Ahmady, et, al. 2016), characterized by complete conformity to the standard and requirements of an organization (Webster Dictionary, 1828), an official group of people (Collin Dictionary, 2022). Structure is the “bone” that carries and support the flow of commands from the top management level to the lower level of employees. In other word, it is the “backbone” that is responsible for the distribution of departments, section, and units of the organization. In addition, t is considered as the networks that allows free communications and transfer of powers between all members of the organization. Organization structure is is a set of methods dividing the task to determined duties and coordinates them (Monavarian, et. al., 2007), it is a business operating system that defines responsibilities and requirements for each particular job and guide the management to achieve its objectives (Sara, 2020), brings order, harmony and peace in both formal and information organisation (Kinicki, et. al., (2016), and defines how jobs and duties are divided, grouped and coordinated in the formal organisation (Mon, et. al., 2019). Technical and vocational education is viewed as a “dual system”. It allows the transfer of knowledge, skills, and attitudes through a proper and unique teaching and training system in order to produce high quality of graduates. The “dual system” would permit a significant integration of apprentices into the workforce arena that reduces the level of youth unemployment and increase skills acquisition. (Gonon, 2017) It is an opportunity to open a gate to labour market and tackling unemployment, particularly among youth. The number of employment youth increased by 4.4 million to 17.5 million. (U.S. Bureau of Labor Statistics report, 2020). The word vocational education is used frequently to refer to “the acquisition of competencies in various occupations along with a more broad-based general education that is necessary for taking on a fast-changing world of work”. (NEP. 2020) Thus, technical and vocational education is not just a unique type of education but also a certified type of education that would enhance indigenous capabilities that would be able to manage, maintain, and probably adapt the imported technology to suit local environments. Technical and vocational education refer to “those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life”. (UNESCO 2020) Vocational students required to integrate their experiences from the workplace with what they learn at classrooms and vice versa. (Baartman et al., 2018) Learning that takes place at classrooms at school and colleges can be a valuable knowledge base for vocational students as they enroll at the workplace. (Kilbrink et.al., 2014; Rintala & Nokelainen, 2019) It is different from formal education that is taught is schools, colleges and universities. Technical and vocational education and the enterprises economic division are eminently essential for the both the technical and vocational education and industries and job seekers. (UNEVOC, 2020) As stressed earlier, the dual system of apprenticeship has been noted to play a vital role in closing the gap between technical and vocational institution and industry. It is an effective method that would permit a smooth school to work transformation. It combines of workplace extensive training programs that allows students to convert theory into real practice under the supervision of workplace supervisors. Younger apprentices reap higher in

their first year in working in labour market than other vocational student qualified at the same degree. (Cavaglia et al, 2020) As a result, a close collaboration between technical and vocational institutions and industries is considered highly significant to ensure the provision of transferring the relevant skills through on-the-job training programs and apprenticeship. In fact, the adaptability of the manpower must be promoted through the development of transferable skills, wider technical and vocational profiles, on-the-job learning program that encompasses apprenticeship. (The World Bank, 2016)

Employers in industries and business can interact with technical and vocational education institutions in a diverse and fruitful methods, that includes, hiring technical and vocational education graduates, apprentices training programs, providing training completion qualifications, and forecasting future skills requirements. (Department of Education, 2020). One of the main advantages of a strong collaboration between technical and vocational education and industries is that, through win-win situation. (Syamhanim, et. al. 2021), facilitate work-based learning (Jabatan. et., al, 2019), and enhancing work experience. (Watisin, 2017) The importance of teachers in the area of technical and vocational education is also noted in related literature. The competencies of technical and vocational education graduates will be influence by the quality of technical and vocational education teachers and their competencies. (Jia., et. al. 2014, Andersson, et. al., 2015) Teachers would success in achieving technical and vocational education objectives if they have a high commitment and values (Gomendio, 2017). Teachers who have a positive attitudes and high degree of intelligence will contribute significantly in work place. (Fiftyana, 2018)

The management of technical and vocational education needs to absorb the know-how and know-why regarding the provision of technical and vocational education. The organizational structure in technical and vocational education colleges and institutions is completely different from a formal education as in universities. The management skills in technical and vocational education institutions must concentrate on creating a mutual interest with industries and business in order to succeed in preparing students for the world of work. A diversity of skills is highly required for those who manage technical and vocational education in order to obtain a satisfactory outcome. In developing countries (Kuwait for example), it is unacceptable that who run technical and vocational education colleges and institutions lack the necessary skills require to maintain a high standard of technical and vocational graduates. Among the skills that are mostly needed to maintain a high standard of graduates are: industrial needs and analysis, marketing skills, negotiation skills, problem solving skills, planning skills, evaluating academic and managerial staff competencies, on-the-job training skills, evaluating graduates' competencies, communication skills, curriculum development skills, and research and developments skills.

On the other hand, academic staff need to thoroughly absorb the notion of technical and vocational education. Academic staff must understand the country's real need of skilled and semi-skilled indigenous manpower that is able to manage, adapt, absorb, develop and maintain the imported technology in essential sectors of the country's economy (e.g., oil and electricity and water). A constant review of academic staff competencies is one of management priorities to ensure their ability to respond to the rapid change in science and technology in related industries.

In Kuwait, according to the Ministry of Planning, the population of 4.5 million people: 1.3 million are Kuwaitis and 3.2 million are expatriates. Expatriates account for approximately 70% of the population. (Ministry of Planning, 2021). As a result, the Kuwaiti government has noted

the shortage of indigenous manpower in essential sectors of the economy (oil, electricity and water), and thus forged the Public Authority for Applied Education and Training, PAAE&T, to respond to the urgent of essential sectors of the economy from semi and skilled indigenous manpower. The PAAE&T expand its aims to enhance interaction with major institutions in the labour market, training national manpower, joint research with local industries, and linking programs to society's needs and requirements. In another word, the Kuwaiti government attention is not only to prepare students to the world of work but also to closing the gap between technical and vocational institutions and local industries. The PAAE&T has five colleges and eight training centers. They are namely: Faculty of Nursing, College of Health Science, Faculty of Basic Education, Faculty of Business Studies, College of Technological Studies. In respect too training centers, they are namely: Higher Institute of Communications and Navigation, Nursing Institute, Sabah- Al-Salem Industrial Institute, Shuwaikh Industrial Institute, Structural Training Institute, Vocational Training Institute, and Higher Institute of administration Service.

3. Research Objectives:

- a. To evaluate the current management philosophy, practice, and structure of the College of Technological Studies, CTS, College of Health Sciences, CHS, and Faculty of Nursing, FN.
- b. To introduce an effective and efficient philosophy, practice, and structure for the College of Technological Studies, College of Health Sciences, and Faculty of Nursing.
- c. To evaluate the current management philosophy, practice, and structure of **the Institute of Nursing, IN, the Higher Institute of Communications and Navigations, HIC&N, the Higher Institute of Energy, HIE, the Sabah Al-Salem Industrial Institute, SSII, and the Shuwaikh Industrial Institute, SII.**
- d. To introduce an effective and efficient philosophy, practice, and structure for the **Institute of Nursing, IN, the Higher Institute of Communications and Navigations, HIC&N, the Higher Institute of Energy, HIE, the Sabah Al-Salem Industrial Institute, SSII, the Shuwaikh Industrial Institute, SII.**
- e. Discussions and Recommendations.

It hopes that the outcomes of the research would guide the management of the PAAE&T in setting an effective and efficient management philology, practice, and management organization structure that would help in producing a high quality of graduates. Eventually, this would contribute in the reduction of the level of dependence on expatriates particularly in essential sector of the country's economy (e.g., oil, electricity and water, health sector, communications, and port authority) .

4. Materials and Methods

4.1 Design & Sample

This research consisted of a descriptive survey designed to identify and examine the current management philosophy, practice, and organization structure at the College of Technological Studies, CTS, College of Health Sciences, CHS, Faculty of Nursing, FN, the **Institute of Nursing, IN, the Higher Institute of Communications and Navigations, HIC&N, the Higher Institute of Energy, HIE, the Sabah Al-Salem Industrial Institute, SSII, and the Shuwaikh Industrial Institute, SII.** It hopes that the outcomes of this research would assess in producing graduates able to manage, adapt, maintain, and monitor the imported technology in vital sector of the country's economy. The oil sector, Ministry of Electricity and Water, Ministry

of Health, Ministry of Communications, and Port Authority were considered to represent the recipients of the PAEE&T graduates. The research excludes the College of Basic Education, the College of Business Studies, and Higher Institute of Administration Service since the focus of this research on those skilled which are mostly needed by the recipients of the PAEE&T graduates.

5. Research Findings:

5.1. An evaluation of the current organization structure for the PAEE&T colleges, faculties, and institutions.

As shown in Figures 1,2, 3 the organizational structure for the selected PAEE&T colleges, faculties, and training institutes seem identical. It is noted that the College of Nursing, CN, is the only college that has a Department for Specialized Studies. The research findings showed the following remarked when analyzing the current organizational structure for the selected PAEE&T colleges, faculties, and training institutes:

Elements	CTS	CHS	CN	IN	HIC&N	HIE	SSII	SII	STI	VTI
Showing the academic/training departments.	No	No	No	No	No	No	No	No	No	No
The availability of research and development department.	No	No	No	No	No	No	No	No	No	No
The availability of industrial liaison office.	No	No	No	No	No	No	No	No	No	No
The availability of department for evaluating the quality of graduates.	No	No	No	No	No	No	No	No	No	No
The availability of a consulting office.	No	No	No	No	No	No	No	No	No	No
The availability of curriculum review and development office.	No	No	No	No	No	No	No	No	No	No
The availability of a training and development department.	No	No	No	No	No	No	No	No	No	No
The availability of design and patent office.	No	No	No	No	No	No	No	No	No	No
The availability of workshops and laboratories	No	No	No	No	No	No	No	No	No	No

evaluation and updating office.										
The availability of health and safety office.	No	No	No	No	No	No	No	No	No	No
The availability of lecturers, trainers, and managerial staff assessment office.	No	No	No	No	No	No	No	No	No	No
The availability of field training evaluating office.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
The availability of a planning office.	No	No	No	No	No	No	No	No	No	No
The availability of information technology center.	Yes	Yes	Yes	No	No	No	No	No	No	No
The availability of legal affairs office.	No	No	No	No	No	No	No	No	No	No
The availability of accounting office.	No	No	No	No	No	No	No	No	No	No
The availability of student's enrollment evaluation office.	No	No	No	No	No	No	No	No	No	No
The availability of academic accreditation office.	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

College of Technological Studies, CTS.

College of Health Sciences, CHS.

Faculty of Nursing, FN.

The Institute of Nursing, IN.

The Higher Institute of Communications and Navigations, HIC&N.

The Higher Institute of Energy, HIE.

The Sabah Al-Salem Industrial Institute, SSII.

The Shuwaikh Industrial Institute, SII.

Structural Training Institute, STI.

Vocational Training Institute. VTI.

Figure: 1 The Current Organization Structure of the Faculty of Nursing/College of Health Sciences.

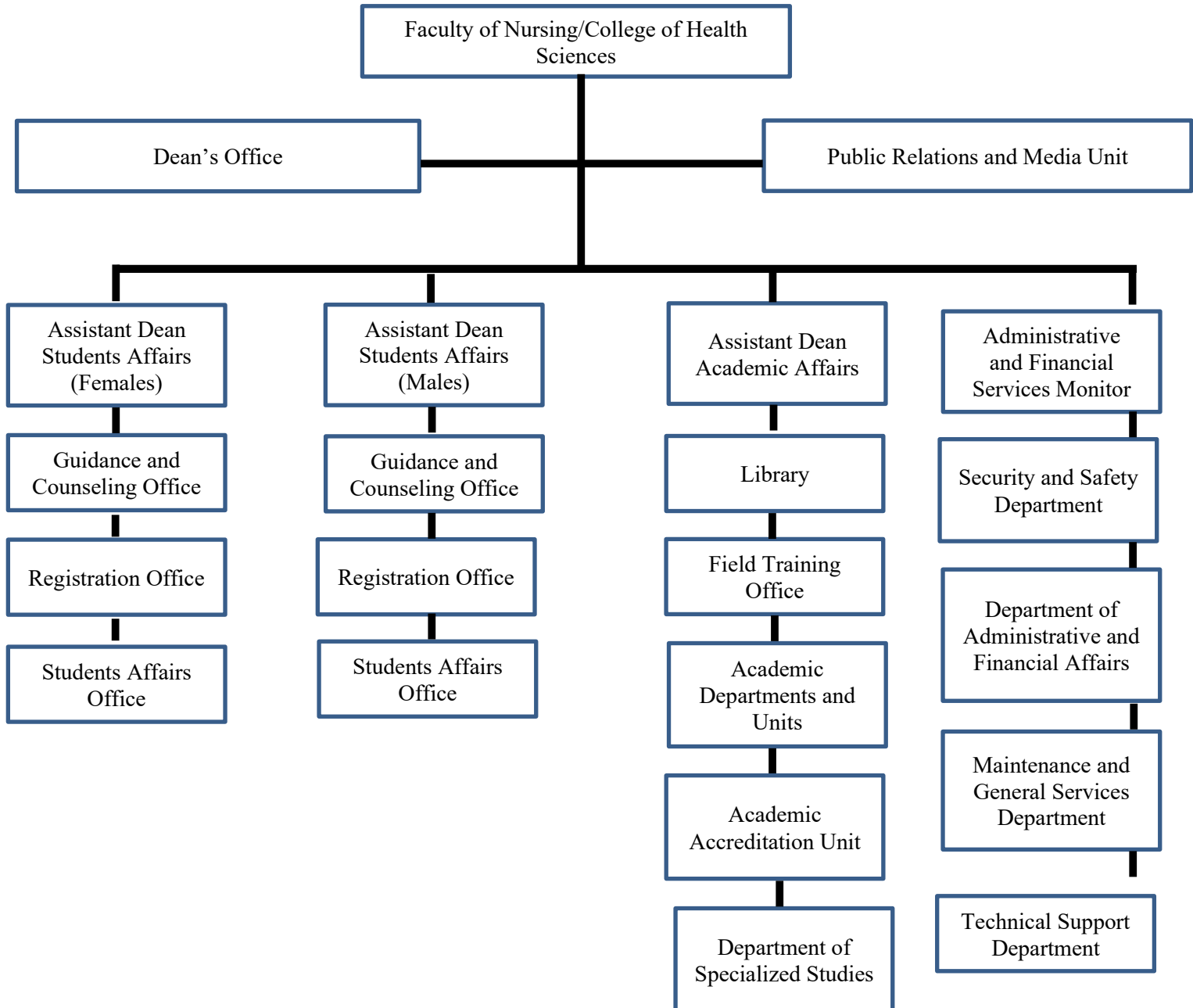


Figure: 2 The Current Organization Structure of the College of Technological Studies.

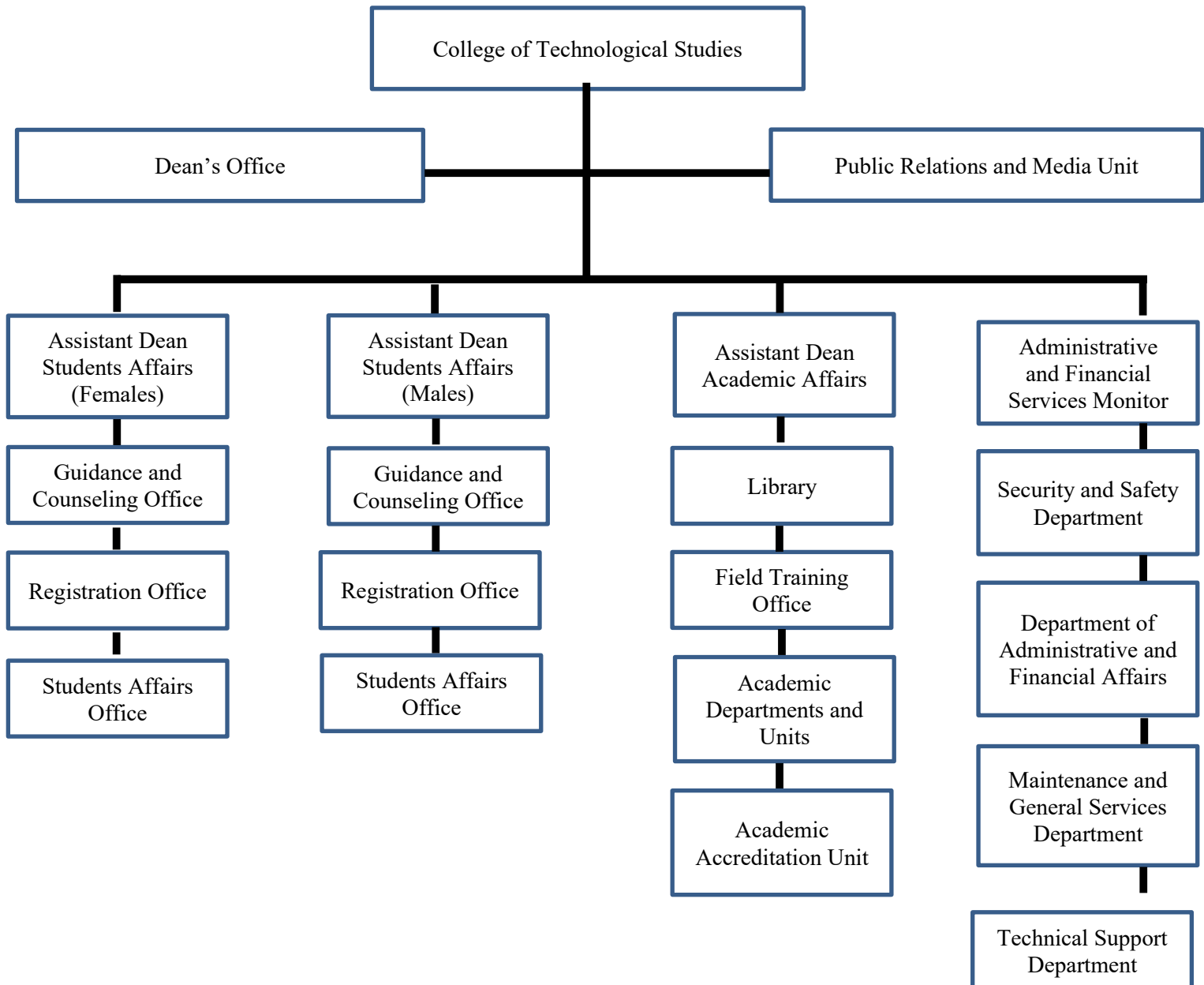
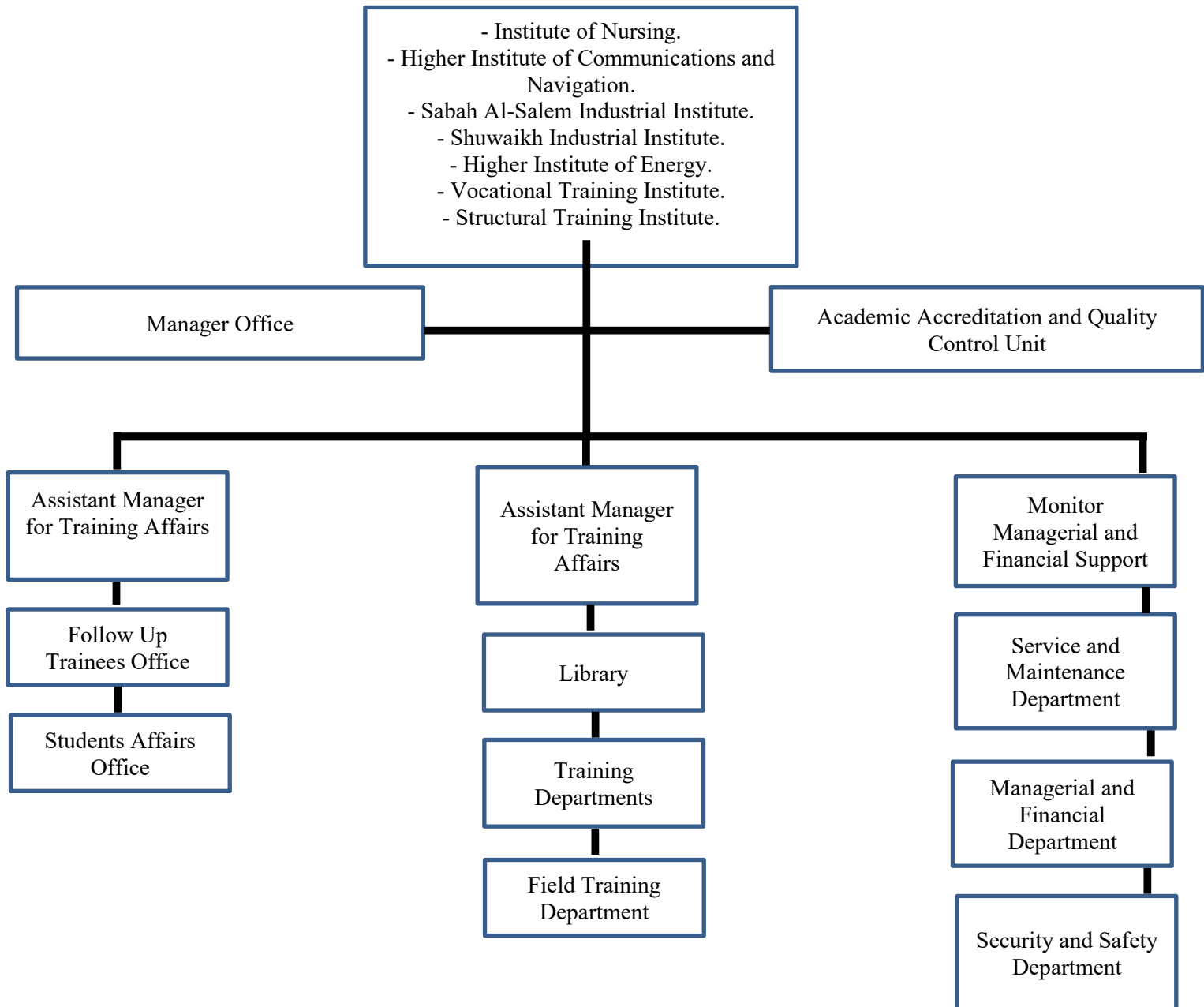


Figure: 3 The Current Organization Structure of the PAAE&T Training Centers



As shown in Figures 1,2, 3 the current organizational structure for the selected PAAE&T colleges, faculties, and training institutes lacks an essential element that have a significant impact on the quality of technical and vocational education. Among which are:

- The lack of research and development department. The main objective of research is to improve the quality of thinking and enrich the level of knowledge, skills, and attitudes. In respect to technical and vocational education, academic and training staff must ensure that the objectives of technical and vocational education have met its objectives and industries requirements have been satisfied in an acceptable manner. In other word, industries should receive graduates that are able to manage, maintain, monitor, and adapt the imported technology to suit local requirements. It is worth mentioning at this point, that technical and vocational education is completely different from formal academic education as in universities for instance. The philosophy of research and development in technical and vocational education is devoted to improve the standard of learning and training in accordance with industrial requirements. Among the areas that are of interest in research and development in technical and vocational education are: measuring the quality of teaching and training, an assessment of the standard of workshops and laboratories, the method applied in reviewing, monitoring, and developing curriculum, measuring the standard of academic and training staff, an evaluation of the quality of graduates, an assessment of the efficiency of linkage with related industries, the ability of management in setting an appropriate and effective plan that ensure meeting industrial needs, and measuring health safety procurations and procedures particularly in workshops and laboratories.
- The availability of industrial liaison office. The interaction between technical and vocational education is highly noted in related literature (Syamhanim, et. al. 2021, Jabatan, et., al, 2019). It is purely fundamental that interactions between both parties (technical and vocational education and industries) is promoted to the highest level so that graduates can acquire the necessary knowledge, skills, and attitudes that are mostly needed by industries. The industrial liaison office must be headed by a qualified personal who understand and absorb the notion and concept of technical and vocational education. Among the skills that are required for ensuring satisfactory outcomes are: marketing and negotiation skills, problem solving skills, communications skills, planning skills, ability to measure the quality of graduates in accordance with industrial requirements, ability to set a rational and efficient criteria's that can be applied to assess the quality of academic staff , trainers, and managerial staff, understanding health and safety procedures and procurations, ability to monitor students attitudes when attending industrial training program, and the ability in reviewing and evaluating curriculum in accordance with industrial requirements. The interactions with related industries can be through several methods. Among which are: joint research and development, curriculum review and development, joint seminars, encouraging secondment, promoting design and patent, setting criteria's for evaluating students before enrolling in technical and vocational colleges, faculties, and institutions, designing and implementing training programs for academic staff, trainers, and managerial staff, improving the standard of workshops and laboratories, and setting health and safety codes and procedures.

- The availability of department for evaluating the quality of graduates. The main objective of technical and vocational education is to produce graduates with the right level of knowledge, skills, and attitudes that meet industrial requirements. In other word, technical and vocational education aim to produce graduates who are able to manage, monitor, maintain, and adapt the imported technology to suit local requirements. Thus, it is essential to forge a department responsible for assessing the quality of graduates to ensure the enhancement of indigenous capability that would eventually contribute in the reduction of dependence on expatriate as in the case of Kuwait. A joint effort between both parties (technical and vocational education and industries) is highly recommended in order to set a rational an applicable criteria and methods focusing on measuring the quality of graduates in related industries.
- The availability of a consulting office. It is essential that the colleges, faculties, and training institutes have a consulting office consist of those staff who are highly experienced in technical and vocational education. The utilization of those staff, particularly, who have a remarkable experience with related industries, would contribute positively in the correction of any deviation in the implementation of plan that is related to the enhancement of the quality of graduates. The consulting office would act as a “backbone” of the top management to assess in defining, reviewing, and monitoring the colleges, faculties, and training institutes main plan and recommend the appropriate action to overcome any unsatisfied outcomes.
- The availability of curriculum review and development office. Nowadays, science and technology are in a rapid change in every area of our life. Therefore, technical and vocational education must respond to the need of industries, particularly in the application of science and technology in industrial production system. A committee specialized in the reviewing, updating, and monitoring the suitability of curriculum to industrial needs is highly recommended. Top management in technical and vocational education must allow industries to play a vital role in designing, reviewing, evaluation and determining the level of knowledge, skills, and attitudes that are mostly needed by industries.
- The availability of a training and development department. It is highly significant that academic and managerial staff acquire the necessary competencies to enable the achievement of technical and vocational objectives. The fact is that, obtaining a master and/or a Ph.D. degree would not automatically confirm that he/she has the necessary knowledge, skills, and attitudes related to technical and vocational education. In other word, technical and vocational education is entirely different from formal education as in universities. Thus, academic and trainers’ staff must enrich their knowledge, skills, and attitude through extensive training programs to thoroughly understand the concept and the requirements that would lead to the achievement of a satisfactory outcome. In addition to, the ability to set an appropriate plan that would enhance not only the standard of teaching and training but also enhancing the quality of graduates.
- The availability of design and patent office. Technical and vocational education require an innovative mentality. A mentality that is able to introduce an innovated ideas and thinking methods to promote a strong collaboration with related industry to serve the country’s overall manpower plan. Academic and trainers’ staff must be encouraged to compete in designs and patents in order to widening the scope of their thinking and enhancing innovation techniques to meet technical and vocational strategies and plans.

Students must be also encouraged and resources must be allocated to transfer students' ideas, drawings, and prototypes into design and patents intellectual properties.

- The availability of workshops and laboratories evaluation and updating office. Technical and vocational education require students as well as academic and training staff to use machines and tools in order to transfer theory into practice. As a result, the contribution of industry in reviewing, evaluating, and updating laboratories and workshops is crucial to ensure the proper transfer of skills that are mostly needed by related industry. The attempt to close the gap between technical and vocational education and related industries is highly recommended particularly in determining the types of skills that meet industrial current and future requirements.
- The availability of health and safety office. The issue of health and safety in workshops and laboratories in technical and vocational institutions is significant since students and academic and training staff expose to toxic materials and high hazardous machines. The participation of industrialists in identifying and assessing the level of hazardous materials and the possibility of accidents is highly relevant to avoid loss of lives. Health and safety procurations and procedures must be enforced and health and safety rules must be avoided and respected by academic, trainers, and students while attending workshops and laboratories. The recording and monitoring of incidents must be shared by top management to prevent any future accidents.
- The availability of lecturers, trainers, and managerial staff assessment office. Technical and vocational education is a unique type of education that is completely different from formal education. The fact is that, obtaining a master or a Ph.D. qualification would not entitle he/she to perform successfully in transferring the require knowledge, skills, and attitudes that are mostly need by industries. The concept and application of technical and vocational education must be first thoroughly absorbed by all members and a regular evaluation and monitoring of staff performance is highly recommended.
- The availability of field training evaluating office. The core of technical and vocational education in on-the-job training program. Therefore, field training program is considered essential since it allows the opportunity for staff and students to visit industrial sites and learn the technology that is applied in the various production process. The objective of field training program is not only limited in the distribution of students on industrial premises, it rather a close monitoring and assessment on the quality of knowledge, skills, and attitudes that is being successfully transferred to students. Indeed, field training program would close, to great extent, the gap between technical and vocational institutions and related industry.
- The availability of a planning office. The role of planning in technical and vocational education is important in shaping academic, trainers, managerial staff, and students' knowledge, skills, and attitudes. A realistic and obtainable objective must be set by the management of technical and vocational institutions with the participation of industrialist. A close interaction between both parties (technical and vocational institutions and related industries) must be promoted to facilitate the achievement of objectives in order to ensure a high standard of graduates.
- The availability of information technology center. The availability of information center is significant in enhancing lecturers, and trainers' knowledge, skills, and attitudes regarding technical and vocational education. Among the relevant information that would not only enhance lecturers and trainers' capability but also in shaping the quality of graduates are: recent academic research publications related to various field of

specialty, types of machines and tools that are applied in related industries, safety and health codes of conducts, names and contact numbers of students and graduates' direct supervisors in various industries, academic accreditation criteria and results, an assessment of the quality of staff performance in various areas of specialty, the college, faculty, and institutes current and future objectives, and the quality of graduates who are working at related industries.

- The availability of legal affairs office. The interactions of staff may result in disputes and/or require legal clarification to settle any managerial and academic matters. Therefore, the availability of legal office within the college, faculty, and institutes premises would serve the interest of all parties to ensure a healthy learning environment that would eventually reflect on the quality of graduates. At present, the main legal affairs department is located only at the PAAE&T head quarter.
- The availability of an accounting office. At present, the main accounting department is located at the head quarter of the PAAE&T. Indeed, the accountants would be expected to experience a serious difficulty in dealing with all accounting issues related to all colleges, faculties, and institutes. Thus, it is preferable to forge an accounting office to facilitate the completion of accounting matters.
- The availability of student's enrollment evaluation office. This office would be responsible for conducting an evaluation (personality, physical, psychological, and academic competencies) for those students who are interested in enrolling at the PAAE&T. Students who do not succeed in passing the enrollment test would not be able to join the PAAE&T. It is worth mention at this point that, most students considered the PAAE&T as the "back gate" of the university since they are unable to enroll in either government or private universities.
- The availability of academic accreditation office. The need for an academic, managerial, and technical accreditation is essential to ensure that the colleges, faculties, and institutes are meeting international standards. A serious and professional assessment of industrialist's views towards the quality of graduates is significant to ensure that the management of technical and vocational institutions have thoroughly and practically applied the appropriate measures that are relevant to maintain a high quality assurance scheme.

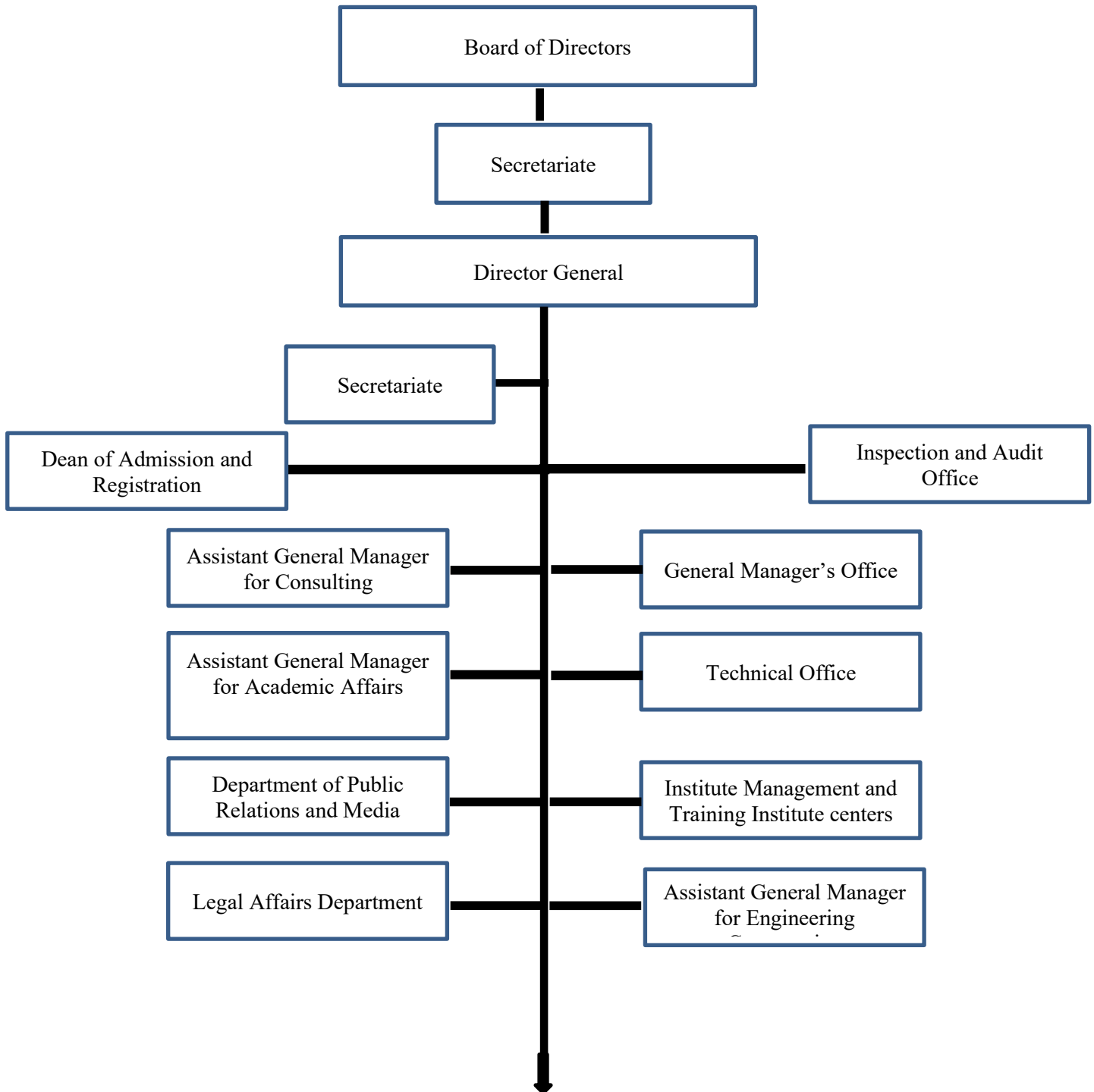
5.2. An evaluation of the current organization structure for the PAAE&T.

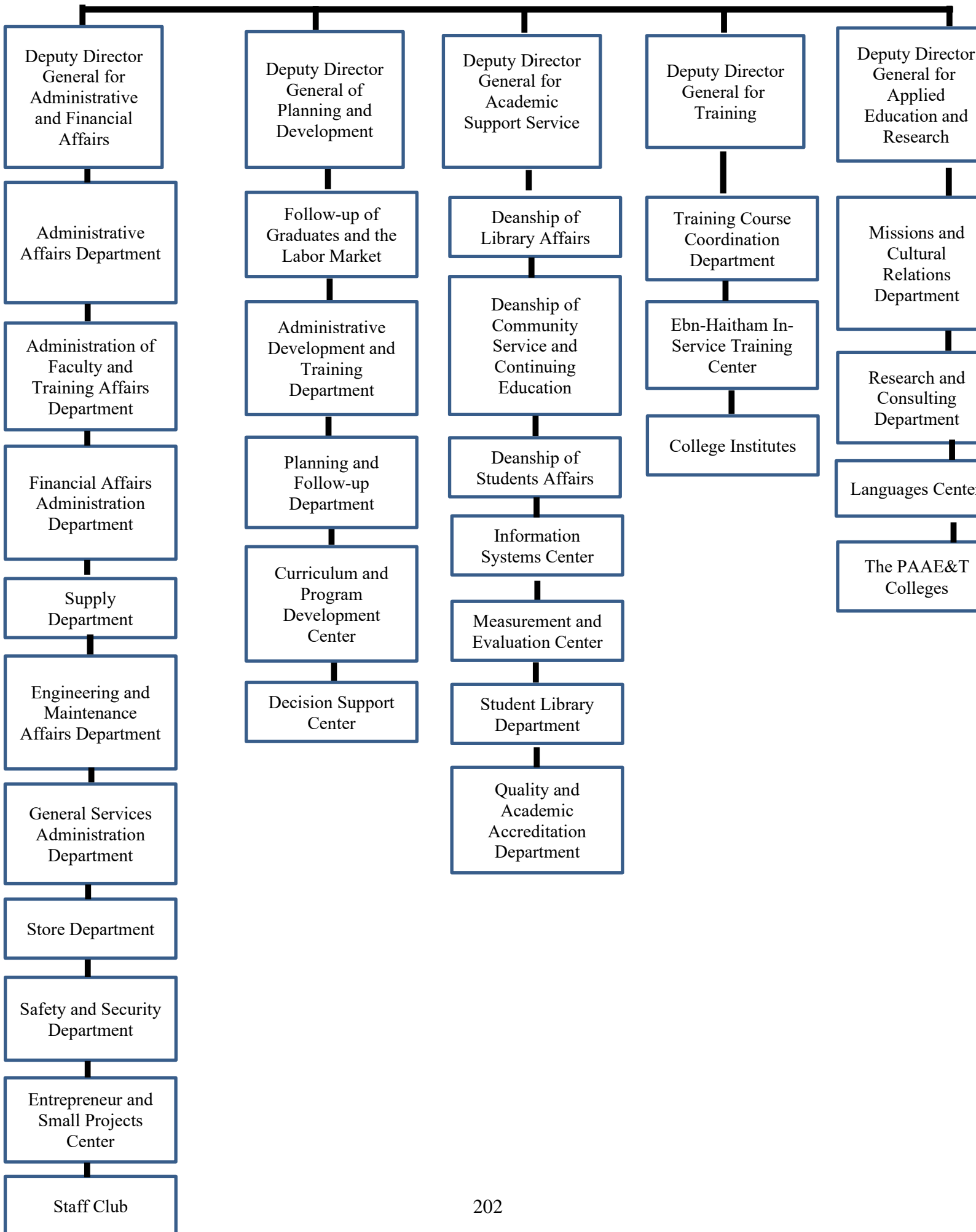
As shown in Figures 4, the organizational structure for the PAAE&T has the following remarks:

- The PAAE&T is in Arabic language only at the main PAAE&T website which eventually would not permit English language readers to identify and examine those academic specialties that are being offered at the PAAE&T nor to conduct research into the quality of learning and teaching.
- There is no information on the Board of Directors which must include representative from those sectors who are in urgent need for the PAAE&T graduates. Among which are: the Ministry of Electricity and Water, the Health Sector, Kuwait Oil Companies (Kuwait Petroleum Corporation, Kuwait National Petroleum Company, Kuwait Petroleum International Q8, Kuwait Gulf Oil Company, Petroleum Industries Company, Kuwait Foreign Petroleum Company, Kuwait Energy PLC, and Kuwait Oil Tank. In addition to representative from Ministry of Communications and Kuwaiti Port Authority.

- There is a considerable unbalancing distribution of tasks and authorities under the Director General of the PAAE&T. There is the secretariate, the Inspection and Audit Office, the Dean of Admission and Registration, the Department of Public Relations and Media, the Legal Affairs Department, the General Manager's Office, the Technical Office, and Institute Management and the Private Training Institute. There are also three Assistances General Manager, they are namely: the Assistant General Manager for Consulting, the Assistant General Manager for Academic Affairs, and the Assistant General Manager for Engineering.
- There are five Deputy Director General positions who are responsible for different tasks which are, in some cases, considered as inconsistent with the specialty of Deputy Director General. Indeed, this would create a confusion and uncertainty about the quality of the PAAE&T graduates. For instance, Administrative Development and Training Department is under the Deputy Director General of Planning and Development which should be under Deputy Director General for Training. It is also noted that under the Deputy Director General for Applied Education and Research there are department which seems irrelevant such as Missions and Cultural Relation Department and Languages Center. In addition, there is no explanation why the Curriculum and Program Development Center is under the Deputy Director General for Planning and Development. In fact, what about teaching and learning and workshops and laboratories. Surprisingly enough, there is no interpretation that the Quality and Academic Accreditation Department is under the Deputy Director General for Academic Support Services. It should be directly linked to the Director General for Academic Affairs. Last but not least, it is obvious that the Administration of Faculty and Training Affairs Department and the Staff Club is mis-placed under the Deputy Director General for Administration and Financial Affairs.

Figure: 4 The Current PAAE&T Organization Structure.



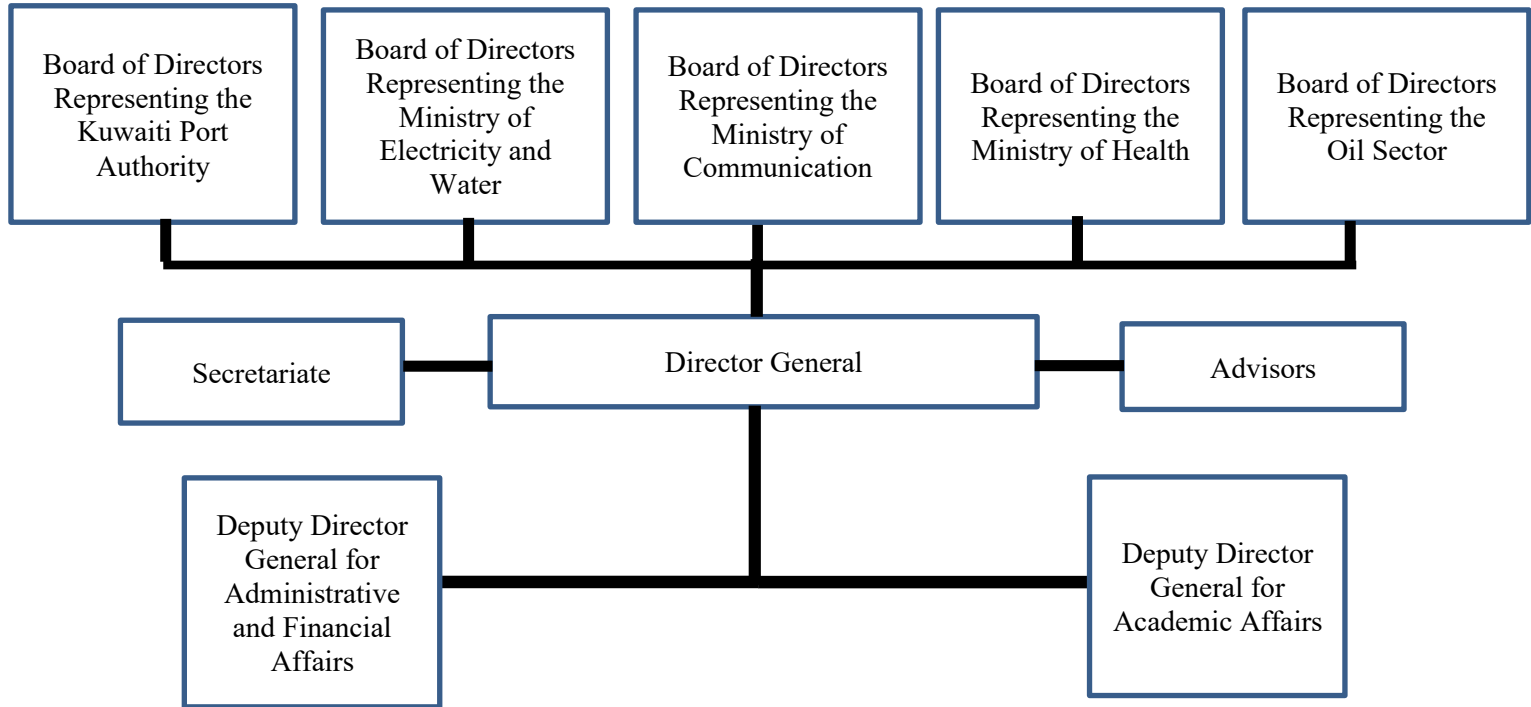


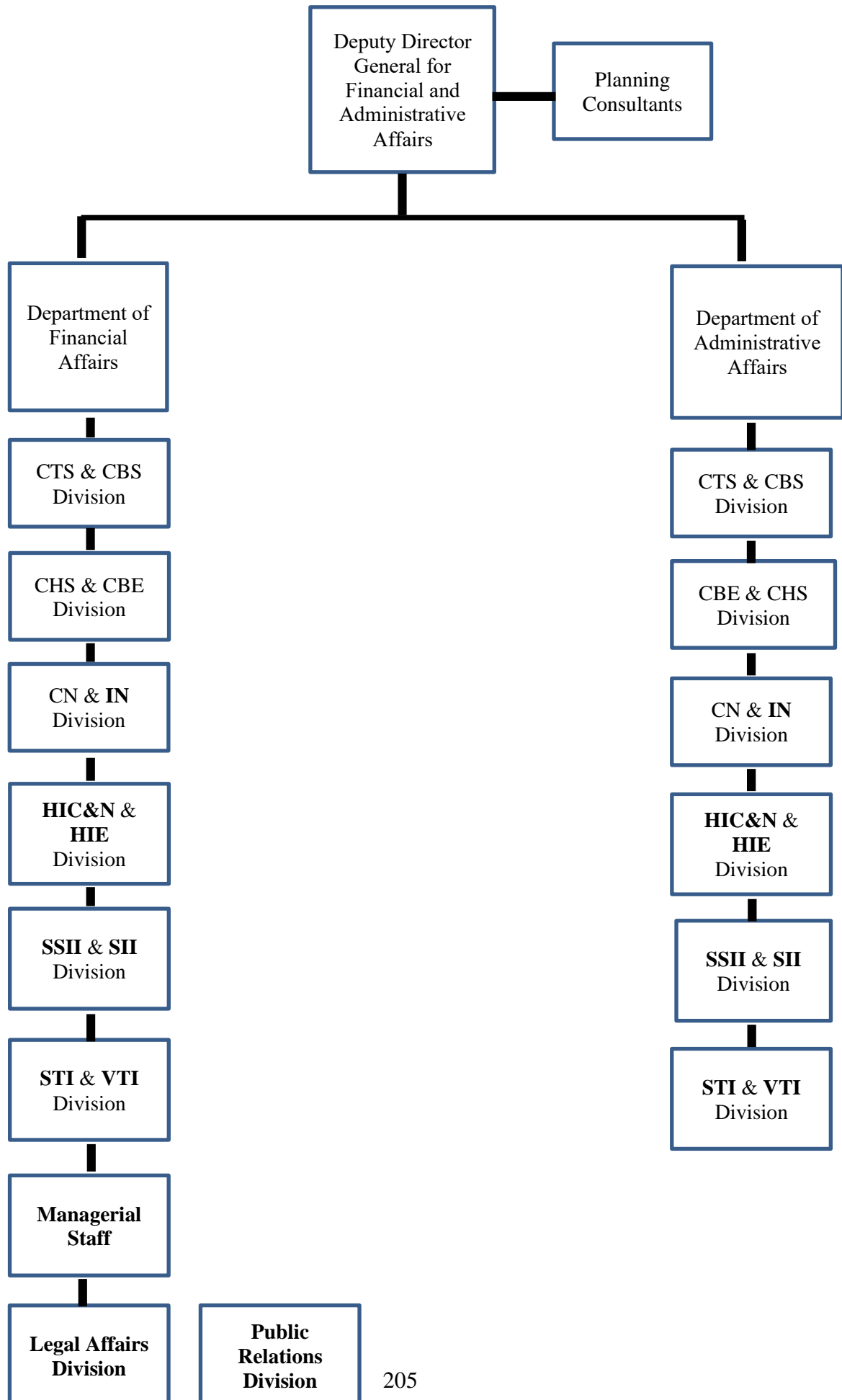
5.3. A proposed effective and efficient organization structure for the PAAE&T.

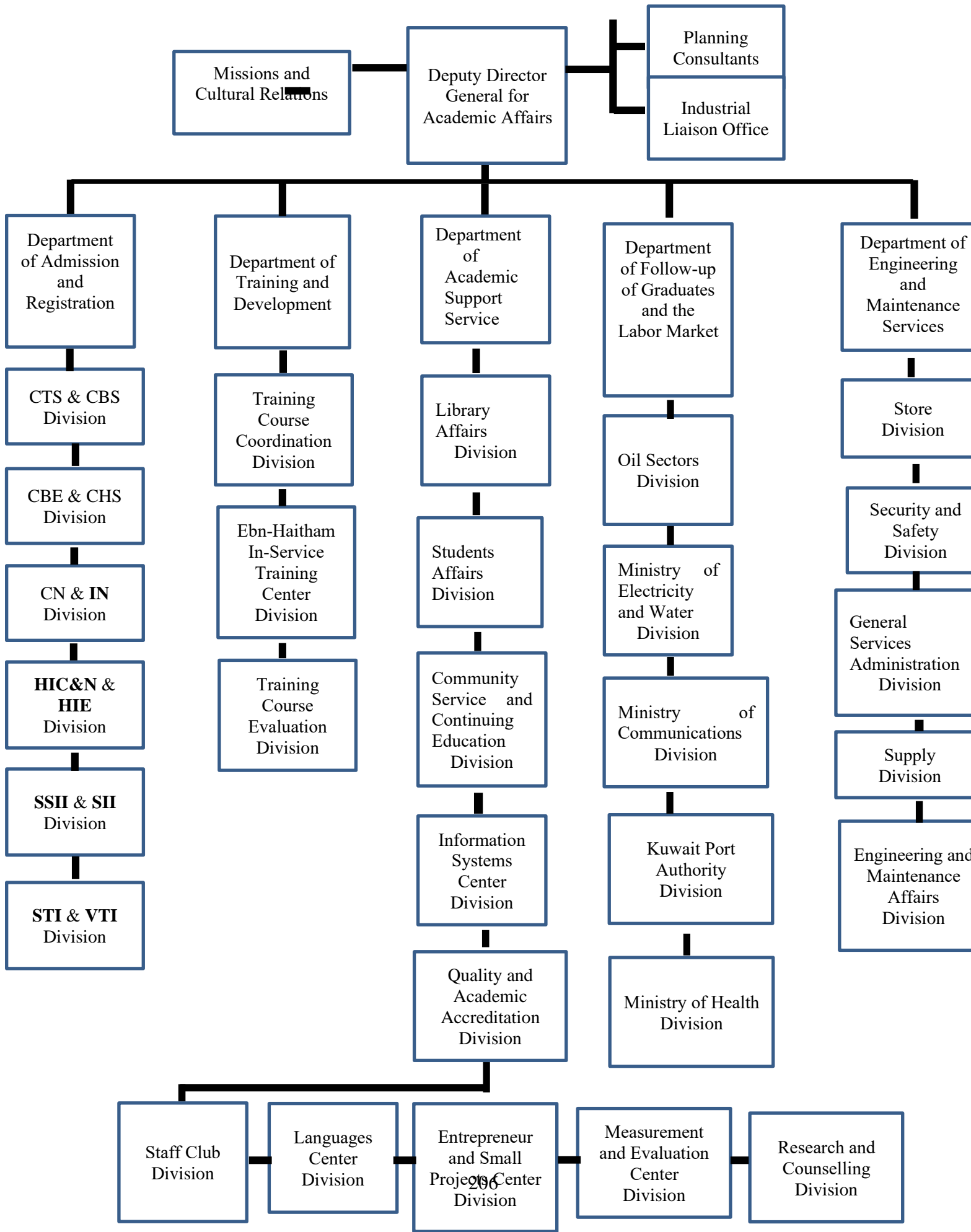
Figure 5, shows the proposed PAAE&T organizational structure which has the followings features:

- The proposed PAAE&T organization structure has boards of directors who truly represent the labor market sectors.
- The boards of directors are classified and group under one sector (e.g., oil sector, Ministry of Electricity and Water, Ministry of Health, Ministry of Communications, and port authority).
- The Director General have advisors from selected academic, trainers, and managerial staff who must show remarkable and a recognized achievement in technical and vocational education.
- The Director General has two Deputy Directors General (Financial and Managerial and Academic Affairs) each with planning advisors.
- The Deputy General Director has two main departments (Financial and Managerial and Academic) under department there are different divisions (each division is responsible for either two colleges, or two training institutes), all under the umbrella of the PAAE&T.
- Mission and Cultural Relation is attached directly to Deputy General Director for Academic Affairs instead of Deputy Director General for Applied Education and Research.
- Several Departments have been converted to divisions under Deputy Director General to reduce the number of employees and to improve work and time utilization.
- The Decision Support Center have been deleted since planning advisors are forged and linked directly to Deputy Director General. In addition, the Curriculum Development Center is also deleted since technical and vocational education deal with other similar relevant issues such as: evaluating and updating workshops and laboratories, industrial liaison office, evaluating the quality of academic and trainers' staff, safety and health procedures and code of conducts.
- The Industrial Liaison Office is forged and is directly linked to Deputy Director General for Academic Affairs to strengthening linkage with related industry in various areas such as: joint research and development, curriculum review and development, joint seminars, joint academic and trainers staff assessment, evaluating the quality of field training program, and evaluation the quality of graduates.

Figure 5: A proposed Effective and Efficient PAEE&T Organization Structure.







College of Technological Studies, CTS.

College of Health Sciences, CHS.

College of Basic Education, CBE.

College of Business Studies, CBS.

Faculty of Nursing, FN.

The Institute of Nursing, IN.

The Higher Institute of Communications and Navigations, HIC&N.

The Higher Institute of Energy, HIE.

The Sabah Al-Salem Industrial Institute, SSII.

The Shuwaikh Industrial Institute, SII.

Structural Training Institute, STI.

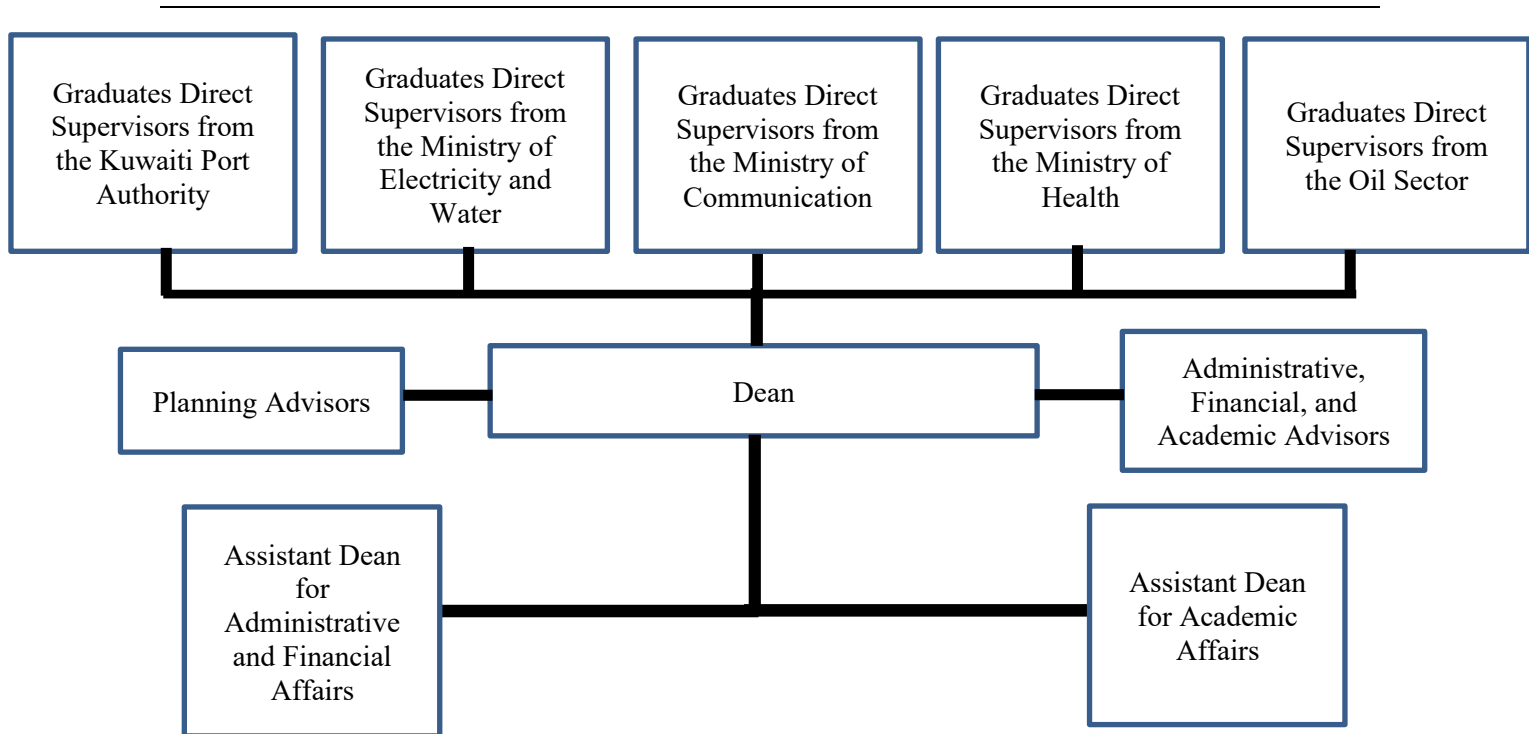
Vocational Training Institute. VTI.

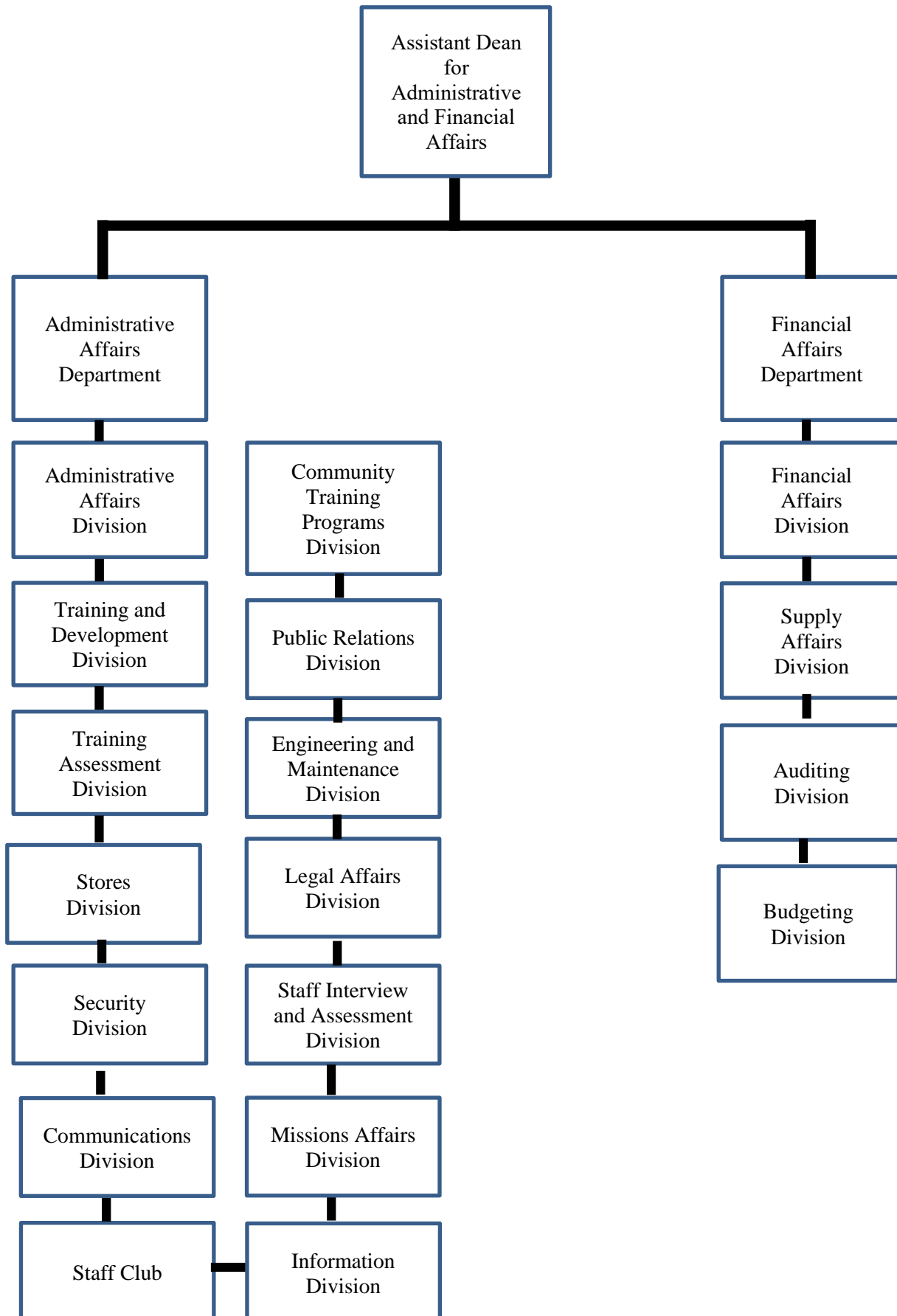
5.4. A proposed effective and efficient organization structure for the selected PAEE&T Colleges, faculties, and training institutes.

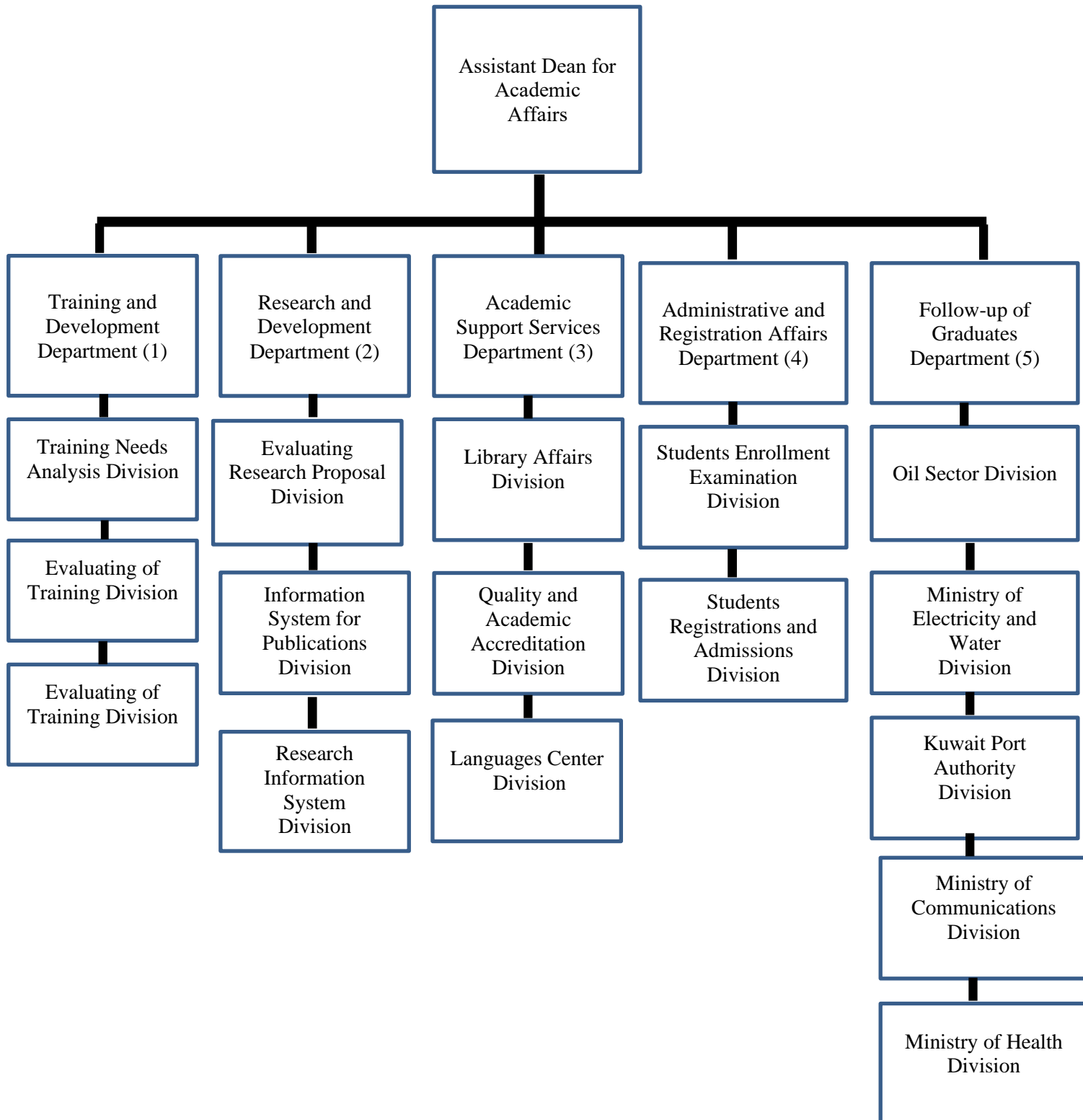
Figure 6, shows the proposed organizational structure that accompanied the PAEE&T colleges, faculties, and training institutes in one organization structure. The new one organization structure has the followings advantages:

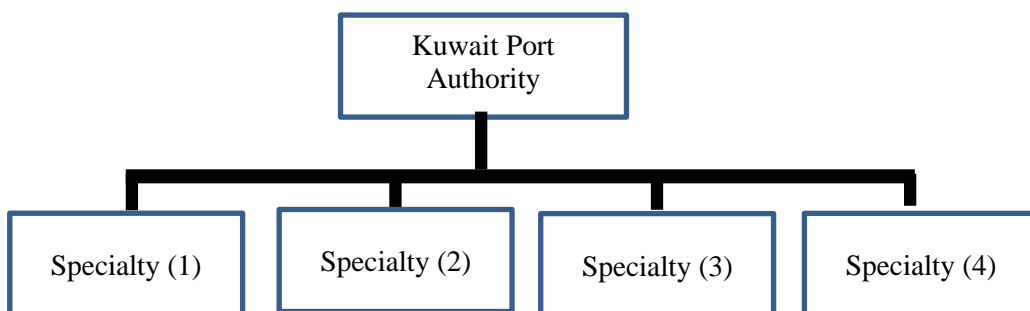
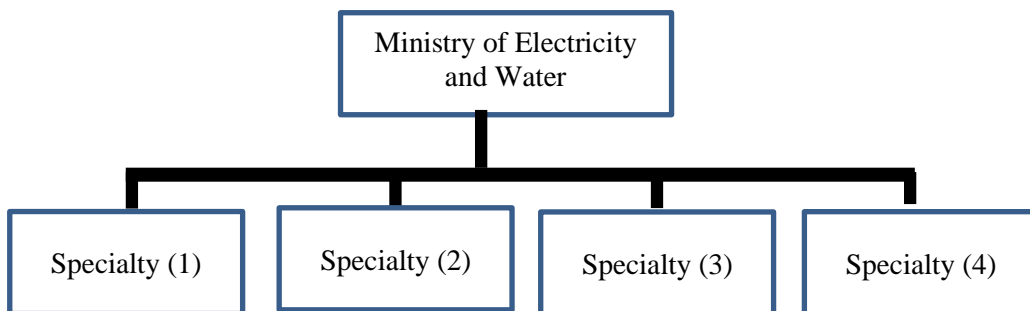
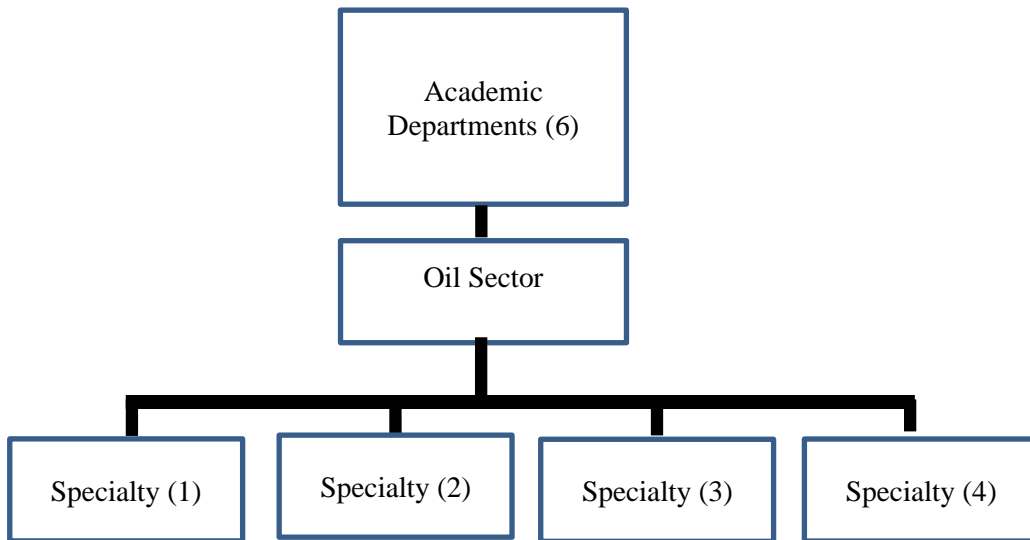
- The proposed organization structure combined colleges, faculty, and training institutes in one organization structure.
- The dean has a direct contact with those direct supervisors in all selected sectors who actually supervise the PAEE&T graduates in their industrial premises.
- The dean has a planning consultant to evaluate and assess the success or failure of the setting objectives. In addition to, administrative, financial, and academic affairs advisors.
- The dean has two deputies, one in charge for administrative and financial affairs and the other is responsible for academic affairs.
- The Follow-up of Graduates Departments is divided into divisions, each is responsible for a specific sector to allow for a close monitoring on the performance of graduates in work place.
- The Academic Department is classified under each sector (e.g., oil, Ministry of Electricity and Water) with specifying the most needed specialty for each individual sector.

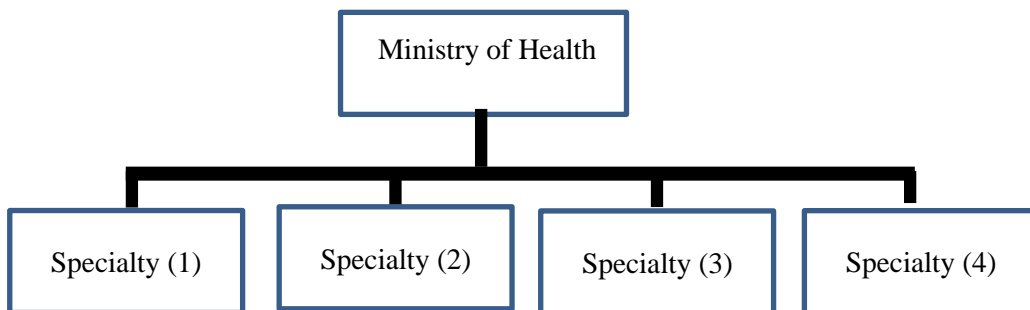
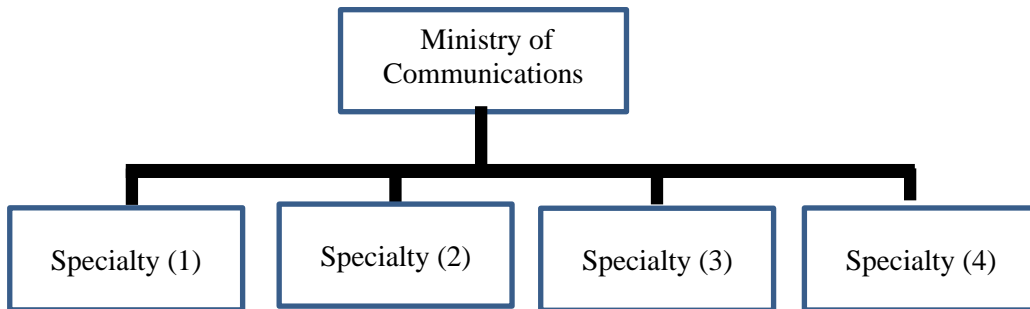
Figure 6: A proposed new organization structure that accompanied the PAAE&T selected colleges, faculties, and training institutes in one organization structure.











6. Discussions and Conclusions

In Kuwait, according to the Ministry of Planning, the population of Kuwait is 4.5 million people: 1.3 million are Kuwaitis and 3.2 million are expatriates. Expatriates account for approximately 70% of the population. (Ministry of Planning, 2021). Kuwaiti decision makers have realized the importance of technical and vocational education and thus forge the Public Authority for Applied Education and Training, PAAE&T. The aim is to respond to the urgent need of local industries (e.g., oil, electricity and water, communications, health, and port authority) from skilled and semi-skilled indigenous manpower. In fact, the country's manpower vision which is embodied in the country's overall plan is to reduce dependence on expatriates in essential sectors of the economy by producing an indigenous skilled and semi-skilled able to manage, maintain, and adapt the imported technology applied in local industries to suit local requirements. However, the success or failure of the Public Authority for Applied Education and Training, PAAE&T, would depend on the management philosophy in setting an appropriate and efficient organization structure that is able to assess in the achievement of the objectives. In addition to, understanding and absorbing the concept, application, and requirements of technical and vocational education. As stressed earlier, it is entirely a unique type of education that requires special knowledges, skills, and attitudes to successfully interact with local industries in order to maintain a high standard of graduates. It is utterly unacceptable to relay on someone who hold a master or a Ph.D. degree in completely a different area of specialty and without technical and vocational certified skilled to produce a high quality of graduates or meeting industrial standards. It is even out of discussion or an imagination that a surgent for instance, appointed to hold a managerial position in technical and vocational institution and expect satisfactory outcomes. What message this surgent for instance, he/she want to convey to his/her students when he/she accept a managerial position and set behind a desk in technical and vocational institutions to conduct a managerial work. Technical and vocational education require a unique type of knowledge, skills, and attitudes. Among which are: ability to interact with industries, marketing skills, negotiation and persuasion skills, innovative skills, setting, reviewing, monitoring, and evaluating an appropriate and efficient plan, team work skills, problem solving skills, ability to assess the quality of students and graduates, setting a rational and scientific criterion in the selection of managerial, academic, and trainers' staff, report writing skills, and presentation skills. Previous research results for the author showed major deficiencies in the standard of graduates from several colleges and training institutions under the umbrella of the PAAE&T, (Salah, 20021).

The proposed organization structure for the PAAE&T focuses more on the recipient of its graduates. Indeed, the Board of Directors who represent the significant sectors in the country's economy would expect to assess in determining the quality of academic and trainers' staff and whether they succeeded or failed in achieving overall objectives. On the other hand, the new organization structure for the PAAE&T colleges, faculty, and training institutions would combine the selected colleges, faculty, and training institutions in one organization structure. The dean has direct contact with graduates' direct supervisors represent each of the selected recipient of its graduates. This would allow for a true and honest interactions and exchange of ideas, thoughts, and proper and efficient evaluation of the quality of graduates.

The recipient sectors of the PAAE&T graduates are the core of the organization structure. The recipients' sectors of the PAAE&T graduates who forms and considered as the "backbone" of the Kuwaiti economy (e.g., oil, electricity and water, communications, health, and port authority). The recipient of the PAAE&T graduates is responsible for determining the

specialties that they are required to sustain an economic stability and prosperity. The new organization structure, without doubt, ignores any specialty which is not a priority, at least for the time being, for the Kuwaiti economy (e.g., automotive, carpentry, architecture). In addition, the new organization structure which combines colleges, faculty, and training institutions in one organization structure has the advantage of combining many specialties that is offered by training institutions. This would allow for a better utilization of human resources, reducing operation cost, and focusing on a better quality of graduates. In other words, quality of graduates is of most priority rather than quantity. It is worth stressing that, without appointing a qualified and certified academic staff at the proposed organization structure with a certified knowledge, skills, and attitudes related directly to technical and vocational education, no positive tangible outcomes can be achieved. Thus, Kuwait would continue to rely on expatriate particularly in essential sectors of the economy for years ahead. This would be worsened by the improper or mis-allocation of millions of Kuwaiti Dinars which would be spent on producing graduates who, unfortunately, are unable to meet the minimum requirements for the recipients of the PAAE&T graduates.

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