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Total Quality Management and its Impact on Establishing an Effective Learning Environment in Abu-Dhabi High Schools

Mouza Saif Ghumail Saeed Al-Ketbi

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جامعة الإمارات العربية المتحدة
United Arab Emirates University

UAEU Faculty of
Education

United Arab Emirates University
Faculty of Education
Master of Education Program

**TOTAL QUALITY MANAGEMENT AND ITS IMPACT ON ESTABLISHING AN
EFFECTIVE LEARNING ENVIRONMENT IN ABU-DHABI HIGH SCHOOLS**

By

Mouza Saif Ghumail Saeed Al Ketbi

A Thesis Submitted to

United Arab Emirates University
In Partial Fulfillment of the Requirements
For the Degree of
Master of Education
Educational Leadership

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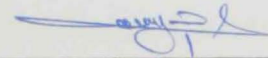
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THESIS ABSTRACT

The issue of quality has gained attention in recent years and has placed the education system under ongoing reform. This has urged educational institutions to improve the quality of education delivered. Based on the relevant literature, this study identified the main features of Total Quality Management (TQM) as well as the features of an effective learning environment. TQM philosophy and its implementation in education provide the theoretical background for this work. The purpose of this paper was to investigate TQM practices and to examine its impact on the learning environment in secondary schools in Abu Dhabi Emirate, in UAE. This paper focuses on the links between (TQM) and the effectiveness of the learning environment. In addition, this paper provides a description of total quality in education. Furthermore, the literature shows how it can be successfully implemented through the leadership of schools. This is a mixed method study using a cluster sample survey to collect data from both academic and administrative staff in (34) schools in three educational zones Abu Dhabi, Al Ain and Western Region. The instrument relied on a Likert-scaled questionnaire which included the main elements of effective learning environments as well as all the key components of TQM theory. The data analysis involved descriptive statistics, T-tests while the relationship between TQM and the learning environment were examined through analysis of variance (ANOVA). In addition, open-ended question responses were categorized in common themes then they were computed to find out the percentage and the frequency. The participants' responses identified elements necessary for an effective learning environment. The findings indicated a significant application of TQM in Abu Dhabi Emirate with comparative differences in the three educational zones. Furthermore, the data revealed the learning environment is effective, along with the key features that determine this. Consequently

this research established a correlation between the two variables, TQM and an effective learning environment.

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Dedication:

To my mother, and my father,

To my husband and my lovely children,

To my brothers and sisters,

For their consideration, inspiration, support, and endless love.

CHAPTER I

General Framework

Introduction:

Quality has become a high priority for all service organizations as it is a demand of the societies; members and institutions. The quest for quality is attributed to a number of changing phenomena in a competitive world as it has become the most important indicator of success around the globe. It is the time where quality should be applied in all service organizations and in each profession. Just like any service organization which opts to implement the changes in business environment, quality in education will play a vital role in the change process as education is the best response in a world of rapid change. Continuous improvement in the quality of education is a keystone in any improvement process. According to Arcaro (1995), "The quality of education will improve when administrators, teachers, staff, and school board members develop new attitudes that focus on leadership, teamwork, cooperation, accountability and recognition" (p.3). Quality is a result of a well constructed culture that involves the participation and commitment of all members. What differentiates Total Quality Management from other theories "is the emphasis on continuous improvement TQM is not a quick fix; it is about changing the way the things are done-forever" (Kanji,1995,p.3). There is a real need now more than ever to incorporate the principle of Total Quality management. Sallis (2002) described it as a " management model, with its emphasis on leadership, strategy, teamwork, rigorous analysis and self-assessment...and it has always been a philosophy for the long haul rather than a short-term fix." (p. xi)

The United Arab Emirates government makes it very clear that their focus will be on the quality of services that are provided for its citizens and it gives attention and support to the quality issue. Developing education has always been a priority of the United Arab Emirates' government agenda. Over the past three years, it is notable that the education sector has taken the highest allocation of the federal government budget as published in the personal website of His Highness Sheik Mohammed Bin Rashid Al Maktoum's (UAE Vice President, Prime Minister and Ruler of Dubai).

According to Abu-Zaid (2010) "95% of high school graduates are not qualified to meet the standards of higher education". The government noticed a gap between high school performance and higher education standards when most high school graduates failed to meet those standards. This was clear from the Common Educational Proficiency Assessment (CEPA) exams' results of the graduates during the years 2004-2008 as announced by ADEC in June 3, 2009 in Abu Dhabi. CEPA is the National entrance exam to Federal Higher Educational institutions in the UAE or to study abroad. It is administered through the National Admissions and Placements Office. The exam tests English and Mathematics and is an indicator of student performance exiting secondary schools. As a result, companies were assigned to evaluate the current situation of education in the Emirate of Abu Dhabi and a plan to change the entire education system was developed to bridge this gap. According to Tribus (1994), Deming often cites a rule which helps to explain "When there is a problem, 85% of the time it is with the system. 15% of the time will be with the workers. Lately he changed the percentage to be 95% and 5%"(p.46). This indicates clearly that leadership is a critical success factor for sustaining continuous improvement in any organization. Kanji and Tambi 2002 claimed

that "leadership is central in all TQM implementation ... and it seems to be the most critical factor for its success"(p.42) According to Tribus (1994), Deming believed that "If you want to improve a product or service, pay attention to the processes which produce the product or service" (p.89).

In response to this problem, new programs were implemented by the Ministry of Education and a new education council was established in Abu Dhabi in particular. The Abu Dhabi Education Council (ADEC) is the educational authority in the emirate of Abu Dhabi. It was established in 2005 and it aims "to develop education and educational institutions in the Emirate of Abu Dhabi, implement innovative educational policies, plans and programs that aim to improve education, and support educational institutions and staff to achieve the objectives of national development in accordance with the highest international standards" (Badri; Mason, & El Mourad, 2010,p.3). In 2008, ADEC took over the role of the UAE Ministry of Education and in the emirate of Abu Dhabi it became the supervising body which includes Abu Dhabi Educational Zone, Al Ain Educational Zone, and Western Region Educational Zone. ADEC embarked on an ambitious reform to achieve the above mentioned aims. One major element of ADEC's strategic plan 2009-2014 is to improve the overall quality of high schools graduates.

Statement of the Problem:

In 2005, The Minister of Education at that time was, His Excellency Sheikh Nahayan Bin Mubark Aal Nahayan delivered a speech in both languages Arabic and English during a press conference that demands for higher level of education. His comments have ignited a debate about the crisis of public education in the UAE (Thorne,

2011). Policy makers are looking to improve the education system. They were satisfied with the students' result of the CEPA exam over the last 5 years. Another report was published from "Makinsey Company" one of the evaluating companies showing that the level of students at ADEC schools is between acceptable and fair (Bayomi, April, 6, 2011). According to data endorsed by Dr Mugheer Al Khaili Director General of Abu Dhabi Education Council in June 3, 2009 in Abu Dhabi, the most common obstacles that can hinder learning, low level of teacher performance; second, low level of quality and the number of teaching hours; third, weak attendance; fourth, traditional evaluating system and finally an inappropriate teaching environment.

Based on that, it is evident that the quality of education and the learning environment are the important elements which need to be scrutinized, as they are directly tied to students' performance. Relating to this the problem of this study can be formulated in the following research questions:

1. What are the main descriptors of Total Quality Management and to what extent it is implemented in the Abu Dhabi high schools from the school leaders and teachers perspectives?
2. What are the main features of an effective learning environment and to what extent high schools environments in Abu Dhabi are considered as effective by school leaders and teachers?
3. Is there a statistical significant main effect of zone, gender and job on the implementation of TQM theory in Abu Dhabi high schools?
4. Is there a statistical main effect of zone, gender, and job on the availability of the effective learning environment in Abu Dhabi high schools?

5. What is the relationship between Total Quality Management and the effective learning environment?

To tackle these questions data will be collected from literature and documents relating to this topic especially to answer question one and two. Data will be collected from the field through implementing a survey addressed to teachers and school principals in Abu Dhabi high schools.

Objectives of the Study:

To define the main features of TQM as a leadership theory in the field of education.

To identify the features of an effective learning environment.

To explore the impact of TQM on constructing an effective learning environment.

To consider the practices of leadership connected with TQM in Abu Dhabi high schools.

To suggest how to implement the TQM features in Abu Dhabi high schools to help establishing effective learning environments.

Scope of the Study

This study is aiming to investigate the role of TQM in establishing an effective learning environment in Abu Dhabi high schools. The United Arab Emirates is a federal country where each Emirate has its own laws that is under the umbrella of the union of the whole Emirates. The Emirate of Abu Dhabi has its own educational system that is different from the other emirates. It will be the focus of this research. Abu Dhabi as an Emirate has got an educational council office that is responsible for three educational zones. These are; Abu Dhabi Educational Zone, Western Region Educational Zone and Al Ain Educational Zone. The sample of this research covered high schools in Abu Dhabi, Western Region, and Al Ain educational zones.

Significance of the Study

The researcher's interest in the leadership field urges her to investigate the impact of the implementation of TQM theory on establishing effective learning environments at high schools in Abu Dhabi. This research is expected to give a clear understanding of what elements of TQM and effective learning environment are missing in the arena of education in high schools in UAE. This research is expected to assist policy makers in getting acquainted with the impact of TQM on establishing effective learning environments in Abu Dhabi high schools. In order to explore the research questions, objectives are necessary to define the context and direction of the investigation. It is expected that it will help to know where we are in the process of creating effective learning environments and the extent to which we need to improve our schools standards. This research is proposed to add new knowledge to the practice because, as per the researcher's knowledge, the literature is lacking real studies on this subject in the UAE educational system. Consequently, this is what gives this study special value and reasonable importance.

The researcher decided to choose this topic as it has a vital role in the current context of educational change which is underway in Abu Dhabi Emirate. In addition, the researcher understands the importance of improving education and intends to assist in this issue. Furthermore, this research investigates how we can have an effective learning environment through the application of TQM principles in high schools so as to enhance the outcomes of the education process.

Purpose of the Study

The purpose of this study is to identify the main features of the total quality management as a leadership approach; and to identify the main features of the effective learning environment. The real practices of leadership connected with TQM in Abu Dhabi high schools are investigated to explore the impact of TQM on constructing an effective learning environment.

Main Terminologies

For the purpose of this study the following key terms are conceptually and operationally defined:

Total Quality Management

Total quality management is a comprehensive and structured approach that seeks to enhance the quality of products and services. Definitions differ according to the field that it applies to; however; a general definition includes shared features such as providing best quality products, involving everyone in the organization, and customer satisfactions. According to BNET Business Dictionary it is "a philosophy and style of management that gives everyone in an organization responsibility for delivering quality to the customer." According to McClain 2003, total quality management is "a strategic, integrated management system for achieving customer satisfaction that involves all managers and employees and uses quantitative methods to continuously improve an organization's processes... simply it is a management approach to long-term success through customer satisfaction that include the following principles: achieving customer satisfaction, making continuous improvement, and giving everyone responsibility" (P.2-3). Total Quality Management is a management process that works in education as well as business where

people want to do their best and it is the management's job to provide an environment that facilitates continuous improvement of the system. It is very important to define two important terminologies that are needed in this approach; those are management and leadership. According to Tribus, (1994, p.46) : Leadership "is the ability to develop a vision that motivates others to move with a passion" and Management "is the ability to organize resources and coordinate the execution of tasks necessary to reach a goal in a timely and cost effective manner". In the field of education, Dahlgaard, Kritensen and Kanji (2002) defined Total Quality Management as an educational "culture characterized by increased customer satisfactions through continuous improvements, in which all employee and students actively participate" (p.19). This culture gains an increasing global emphasis because quality is the main component of global competitiveness. They believe that in the present changing environment of the business world, it is evident that education will play a vital role in coping with the change process. There is a real need to incorporate the principles of TQM in any education and there is an even greater need to educate specialists in this field and to propagate new ideas.

Learning environment.

According to Teacher Glossary of Terms, it is "The place and setting where learning occurs; it is not limited to a physical classroom and includes the characteristics of the setting." It includes, but is not limited to, school buildings, facilities such as technologies, laboratories, sport gyms, libraries...etc. Grabinger, and Dunlap, (1995) describe it as "an atmosphere of knowledge building learning communities that utilize collaborative learning among students and teachers"(p.10). It includes the school culture which is defined according to Deal (1993) as "the commonly held beliefs of teachers,

students, and principals that have been formed over the course of the school's history." According to Roberts & Pruitt (2003) schools that are characterized by its reflective dialogue, focus on students learning, interaction among teachers, collaboration, and shared values and norms "offer a climate in which students can perform to standards. They offer a high quality learning environment for teachers, which translate into greater learning opportunities for students." (p.10)

Previous Studies:

The education sector attracts the attention of the political leadership in our country as it is the future power of the nation. A high quality of education is expected in return of huge budgets which are specially set for schools. Quality is a necessity in our world today with the changes that are taking place everywhere around us.

In an application of Total Quality Management in public higher education there is a study conducted by Aly and Akpovi 2001 entitled "**Total Quality Management in California Public Higher Education**". This study was investigating the implementation of TQM principle, the challenges, and the benefits of this implementation in two public universities in California, The California State University and University of California. A questionnaire was sent to all campus in both universities. Data analysis shows that the California State University' system has a wider implementation of TQM principle than the University of California's system. Furthermore, this study shows that the main challenge for TQM implementation is the resistance and unwillingness to change by faculty, administrator and staff while supportive culture, leadership, and commitment of faculty, administrators and staff are the sources of successful implementation.

Hernandez, R., J.(2001) conduct a case study in Texas, which involved researching a district in Texas that has implemented TQM for the past eight years. The paper title is "**Total Quality Management in Education: the Application of TQM in a Texas School District**". The purpose of this paper is to examine the implementation (the process of implementation, the evaluation procedures) and the effect of the Total Quality Management Model in one Texas school district. The main findings of this paper are District leaders chose continuous improvement so that the approach could not be tied to any type of program. The approach is well implemented in most areas, although not uniform in all areas where leadership received the highest rating. The district implemented the quality philosophy by establishing a district wide in-service training. This involved all stakeholders throughout the district, and it is notable that establishing a common language and goal toward TQM helps in bringing improvements.

As change is a key element in TQM, there is another study that has shed light on educational change and TQM conducted by Lukhwareni, M., H., (2002) entitled **Total Quality Management as a Response to Educational changes in School Management**. It aims at investigating whether the changes introduced in the South African Education System since 1994 have in any way brought about any improvement in the quality of education offered. Furthermore, it explores whether there are schools which offer quality education in TQM-way. The main findings point to the possibility of total performance improvement if schools are managed in a continuous improvement way, thereby transforming them into quality schools, which offer quality education. As a consequence, top management's commitment to total quality is crucial for its successful implementation. Moreover, school with continuous improvement year after year, will

merit the attention of parents and learners alike. Finally the empirical research confirmed that there are schools offering quality education and have adopted the total quality management approach.

A study by the title "**Total Quality Management in Higher Education: How concepts and processes manifest themselves in the classroom**" was conducted in (2002) by Hurst, C. It aimed to investigate how faculties implement TQM concepts and processes in their classrooms. More especially, it investigated how the following are identified: vision, funding, training, rewards and recognition, commitment, teamwork, customer orientation and involvement. The responses were collected through one-on-one interviews, class observation, and document reviews from a purposefully selected group that consisted of ten faculty members. The main finding is that the participants had implemented TQM in some form in at least one of their classes and there is a need for faculty development in how to teach and implement TQM concepts and processes in the classroom.

A study about "**Enhancing educational learning through some TQM principles**" was conducted by S. Mehra, and M. Rhee (2003). This paper which focused on the relationship between cooperative learning and total quality management (TQM), proposes the use of specific TQM principles to enhance the learning process. The authors proposed that adopting principles of teamwork and empowerment can enhance classroom learning. They build their assumption on, that premise that cooperative learning is a powerful tool to equip students with people skills, and empowerment is a strong drive for teams to work effectively. Teamwork and empowerment are two main elements of TQM, therefore there are similarities between the cooperative learning model and the TQM

philosophy. This study was carried out during the academic years 1997-2000, on 260 MBA and junior/senior level undergraduate students were sampled for this study. This study shows that student shows a positive attitude toward participation and learning and that was attributed to the application of TQM. Thus, using TQM principles facilitate students' learning.

In a study that was conducted by Martin, M., D. (2005) entitled **A review of quality education concepts to improve teaching**. The researcher tries to define total quality education and how it and other techniques can be successfully integrated into the public schools to improve overall education for students. Three school districts were chosen from various states to represent successful application of quality programs for three years or more to improve education and the overall school environments. Collected data were used to compare and contrast the school districts in relation to their quality programs. The data shows these districts and schools have created structures and programs, which work to improve their academic results and the educational environment. They chose to spend the money and make the ultimate effort toward positive change through quality education programs. The changes allowed the districts to win awards. They also received acclaim within the educational field for their unique programs and their high test scores and effulgent educational environment.

Continuous improvement is one of the core values of quality management so in a study conducted by Temponi, C.(2005) **Continuous improvement framework: implications for academia** the researcher analyzes the main elements of continuous improvement (CI) in higher education and the concerns of academia's stakeholders in the implementation of such an approach. He suggests guidelines for the development of a

culture more receptive to the implementation and maintenance of a CI approach in higher education. The main findings of this study are that the adoption of a CI approach requires the commitment of upper administration to discover the underlying culture, to examining the appropriateness of objectives to adopt CI, and that task is supported by documented analysis of CI and quality initiatives in the institution. In addition, the self assessment process involved in CI is facilitating necessary changes and they could be the starting point for such changes as it helps individual and organizations to measure where they are on the path to excellence and understand the gaps, and then stimulate solutions. The roadblock for quality initiatives is creating a quality culture and long-term commitment to CI in the educational institution via engaging the administrative and academic system and all stakeholders.

The researchers Sakthivel, P.B.; Rajendran, G. & Raju, R.(2005) conducted a study entitle "**TQM implementation and students' satisfaction of academic performance**" The purpose of this study is to develop a TQM model of academic excellence and empirically establish a relationship between TQM implementation and students' satisfaction of academic performance. In addition, the study aims to find the significant predictors of students' satisfaction. This study found that of the five TQM constructs that jointly and significantly predict the students' satisfaction, only two TQM constructs (out of five) These are; "Commitment of top management" and "Campus facilities". Moreover, the result shows that the increase in commitment of top management and improvement in campus facilities lead to students' satisfaction.

Another study that was conducted by Ngware, Wamukuru and Odebero (2006) in Kenya entitled "**Total quality management in secondary schools in Kenya: extent of**

practice". It investigated the extent to which secondary schools practiced aspects of total quality management. A sample of 300 teachers in a residential session during a school holiday provided their perceptions on the practice of TQM in their schools. The study aimed to establish teachers' perceptions of the extent to which school administration ensured that the aspects of TQM were practiced in their schools. Data were collected using a questionnaire. The main finding of this paper shows that Board of Governors and chairpersons in secondary schools are not providing the necessary leadership that would promote TQM practices necessary for the schools' continuous improvement. However, some head teachers were providing the required leadership with a considerable number of school managers empowering their employees. The majority of schools are not committed to strategic quality planning, though they do promote human resource development initiatives. It is very important to acquire the principle of TQM to ensure motivating the staff and having effective workforce.

Vouzias, F. & Psychogios, A.,G.(2007) conducted a study, **Assessing managers' awareness of TQM** which aims at analyzing the rationale and the development of a measure that can be used in assessing managerial awareness and understanding of the total quality management (TQM) concept within organizations. The main findings of this paper is to carry out a total of nine concepts of TQM then investigate the awareness of each one of these items by developing and testing a measurement of the philosophical or "soft" side of TQM and they are: Soft TQM statements, continuous improvement, increased and continuing education and training, team work, employee empowerment, involving everyone in an organization, focus on customer satisfaction, committed

leadership and strong top-management support, participative management style and cultural change.

The TQM theory is mainly a business theory that has been merged with education since the beginning of the twentieth century. Lynne, E., & Ross, B.,(2007) conduct a study entitle "**Are students customers? TQM and marketing perspectives**". The researchers aim to investigate whether the adoption of the terminology, systems and processes of the "student-as-customer" leads to a degradation or improvement of the quality of education and level of service delivered to students. The main finding of this paper is that students are neither the sole consumers, nor are they the sole customers. Therefore, the focus must move to ensure that the implicit and explicit needs of students and other stakeholders are met. Furthermore, the student must be aware of the contributions to, and expectations of, their education on the part of all other stakeholders. In complex exchange processes such as these, customers have to be educated in their role. The same is true for students as customers.

In his dissertation "**The Relationship of Teacher Quality and Student Achievement in Elementary Schools from the New York City**", Alvares, R., (2008) aimed at analyzing the relationship between teacher quality and student achievement in elementary schools. The main purpose of this study was to explain how observable teacher characteristics are related to the student achievement, this study concluded that some observable teacher quality characteristics such as the educational background, certification & training status and professional development activities are significantly related to the student achievement. The study was defined as a cross sectional research study that uses a survey distribution at one point in time to gather the independent

variable data and uses students' standardized test scores as the dependent variable data. The study identified statistically significant relationships between eight observable teacher characteristics (highest degree earned, major field of study, the pre-teaching tests, certification area, participation in professional development activities, support received, rewards gained and participation in other professional development activities) and the student achievement, expressed as the class performance average in Math and English Language Art (ELA) tests.

Another study title "**TQM Principles and the Customer's Expectations in the Classroom**" conducted by Hewitt-Edmond, M. (2009), investigated the application of Total Quality Management (TQM) principles in three educational settings in the United States: public school, private school, and home school. It aims to look at the needs of the customer and the ability of organizations to meet customer expectations in three different educational settings and to compare expected quality versus actual quality using defined measures. The main findings are: private school and home school parents clearly deem a quality education as a long-term investment and they are looking to build assets in their children's future. Parents feel that their needs are being met in their school choice. On the other hand, for public school parents, a quality education depends on their child's ability to perform at or above standard, or the ability to pass mandatory standardized tests. Furthermore, the expectation of quality may not extend into the future goals of college.

According to the previous shown data, it is well defined that using TQM in the field of education improves the performance of teachers and the student which is reflected in their academic achievements. It was noticed that using TQM principles

facilitates students' learning as it focuses on students' empowerment and teamwork that enhance the learning process. It produces collaboration among the members in the school which unifies their efforts to improve the overall educational outcomes toward positive changes in the educational environment. Self-assessment is the starting point for continuous improvement that facilitates for long term changes toward quality improvement. The quality culture cannot be met without the upper administration commitment. As shown in some studies, TQM practice in the field fails because of the lack of necessary support. To ensure its success top management needs to share the leadership, ensure individual involvement and participation, support team work, empower the employee, provides opportunities for education and training, urge continuous improvement, and gain the satisfaction of teacher, students and all stakeholders. Studies prove that top management commitment for continuous improvement transform the school to provide quality education. Involving the stakeholder in stating the goals and vision of the schools will facilitate to bring up the improvement and changes in the education. Meeting stakeholders' expectation and students' needs and satisfaction are parallel to customer satisfaction as some studies investigate whether students can be considered main customers or not. Some studies that investigate parents opinion in quality shows that they believe quality education is a long-term investment that will pave the way for their children's future. Some other studies establish a correlation between TQM implementation and the students' satisfaction of academic performance. The students' performance is a reflection of the quality of teachers as some studies finding shows. Therefore, it is important to choose the best teachers and to ensure their professional development and to keep them up to date with knowledge and skills. They need to be

train how to implement TQM principles in their classroom. They need to be trained on how to use reward, recognition, teamwork, and involvement in their communication inside the school community to improve the learning environment.

Total Quality Management and its Implications for School Leadership Literature Review

Introduction

In recent years governments and educational institutions have been held to greater fiscal accountability. In an effort to be cost effective and continually improving while delivery quality services and outcomes. As a result, educational institutions have had to search for solutions to achieve economic, social and education outcomes. Total quality management is one philosophy originally used in business but also used in the educational field. There are many studies and research that indicate a relationship between Quality management and other aspects of business and education. In this part of the study the researcher will touch upon these previous studies and research to produce some evidence proving such a connection exists. Emphasis will be given to School leadership and its use of TQM and the skills and features of effective learning environments in schools.

Total Quality Management: Varied Perspectives:

The idea of quality is not a new concept; it has been here since human beings roamed the earth. Humanity keeps searching and looking for ways that could help them to do their best. According to Maguad (2006)(as cited in Marouni, 2010), “human beings have pursued quality since the beginning of civilization, but the methods used to manage problems relating to quality have changed from period to period” (p.51). Business was in the vanguard of the quality movement as companies competed to stay in business, to

provide products and services that are useful to customers and gain customers' satisfaction. This aim cannot be achieved until firms change their management philosophy, practice and improve their performance and product as well. Gaining the customers' satisfaction was a competitive process where improving the quality of the product was achieved. Ali and Shastri (2010) noted that:

The objective of TQM is to build an organization that produces products or performs services that are considered as quality by those who use them. The quality of a product or a service is the customer's perception of the degree to which the product or service meets their expectations. (P.10)

As quality theory proves its success, other service sectors borrow this theory and adapt it to their fields such as health, education and government organizations. It spread all over the world and the stories of its success are well known in each field. Customers' or service recipients' satisfaction is the measurement or the standards that needed to be met to ensure the high quality product or service. According to Corrigan (1995), TQM is a "management philosophy that builds a customer-driven,...organization dedicated to total customer satisfaction through continuous improvement in the effectiveness and efficiency of the organization and its processes" (p. 61). It is a humanistic theory where it focuses on the human aspect by expecting that employees are willing to do their best but the system is not helping them. This emphasizes the changes involved in the employees such as leadership, planning, setting the vision, the decision making process and providing staff with opportunities for professional development and growth in their organizations. Warwick (1995) (as cited in Hewitt-Edmond, 2009) stated that:

Deming explained that in an organization in which quality is a paramount concern, everyone wins. There are no losers. This means everyone involved is improving in performance and gaining in self-worth, and the sum total of positive individual change is organizational improvement (p.4)

In this process, all employees are improving their skills, performance and the organization's product or service. At the same time, they support the process of improvement while inducing positive change. Organizations that search for quality provide employees with an environment that supports group work, collaboration, accountability and satisfaction. According to Venkatraman (2007), quality management theory "stresses teamwork, finding better ways to do things, sharing responsibility and dramatically improving institutional cultures" (P.95). Continuous improvement is one notable feature of quality management theory and it is a part of an everyday process. The organization should improve the way the work is done and the product itself in a way that saves time, effort and money as well, and its considered everybody's job. (Michael, Sower, and Motwani, 1997) think that TQM can be defined as a general management philosophy and a set of tools which allow an institution to pursue a definition of quality and a means for attaining quality, with quality being a continuous improvement ascertained by customers' contentment with the services they have received. It includes ideas and tools that help each organization to tailor its approach according to its need, and the product or the service that has been delivered to the customers (As cited in Ali and Shastri, 2010).

Flynn, Schroeder and Sakakibara (1994) see quality management as:

An integrated approach to achieving and sustaining high quality output, focusing on the maintenance and continuous improvement of processes and defect prevention at all levels and in all functions of the organization, in order to meet or exceed customer expectations. (p. 342)

This leads to involve everyone in the organization in a continuous improvement culture where new ideas are generated everyday and new plans are set to improve the products or services. Involving everyone in the process of quality is one distinguishing feature for “total” quality management. In a total quality management culture everyone, whatever their role, task or position in the organizational hierarchy, is responsible for the management of their contribution to the whole, as total quality management is a “holistic management system requiring the development of a system-wide culture” (Doherty, 2008, P.261). The responsibility that everyone in the organization has will lead them to complete the work in a perfect condition in the exact time. This will save time and effort and cost as well. Deming (1986) defines quality as “a predictable degree of uniformity and dependability at low cost and suited to the market” (As cited in Venkatraman, 2007, P.94). Saving the cost is an important indicator but in a way that doesn’t affect the quality.

The definitions of total quality management TQM mentioned previously in this study, share to some extent core ideas such as customer satisfaction, continuous improvement, positive change culture, involvement, collaboration, responsibility and managing quality to reach excellence. On the other hand, each definition includes unique concepts such as integrative management that demands the participation of all members of the organization. All parties involved feel ownership in the process and the result of

the organization. Both members and their organization will gain benefits and will contribute in the continuous process of improvement. By the end of this process, customers and society will be satisfied with the quality of the product or service.

The Development of Quality as a Concept:

Quality theory has improved over a long period of time. It is crucial to review the historical aspect of total quality management as it had roots in quality control practices related to the manufacturing of products. The scientific approach to management, which is associated with Frederick W Taylor, was the base for quality theory. Schwass (2010 p.4) noted that the scientific approach started during the 1930s in industrial manufacturing when the process of inspection or quality control is used to ensure that markets are supplied with goods that met the customers' expectations. As quality is being inspected, it shows that the employees are not concerned about the products quality. As a result, quality assurance and quality improvement were replaced to be workers' own responsibility (Sallis, 2002). Quality awareness should be built at each development stage of the product itself. Moreover, according to Lal (2008) quality awareness should continue to the usage stage where users give their feedback which is essential for improving the quality of the product. Continuous improvement is one of the core values of quality management that aims at continual increase of performance. It is based on Shewhart cycle which consists of a four-step; Plan, Do, Check, and Act (PDCA). The PDCA is an endless cycle that should be repeated repeatedly for constant improvement. W. Edwards Deming introduced this concept in Japan, which was known as the Deming cycle. (Marouni, 2010). The theory was initially introduced when a group of individual Americans were guiding Japan to establish its economic power after the World War II.

When discussing the topics of quality in general or TQM in particular, their names come to the forefront as their ideas redesigned the service organization and the way they serve their customers (Olson, 2009). W. Edwards Deming, Joseph M. Juran, Kaoru Ishikawa, and Philip R. Crosby are among the most notable names of quality studies. Their work gave the quality management its features. Quality theory and extension of quality management concepts and highlight Total Quality Management (TQM). According to Olson (2009):

Deming, Ishikawa, and Juran share the view that an organization's primary purpose is to stay in business, so that it can promote the stability of the community, generate products and services that are useful to customers, and provide a setting for the satisfaction and growth of organization members (p.13)

As described above, quality "gurus" address and emphasize specific shared quality issues such as involvement of organizational management in the quality efforts and the focus on customer satisfaction. Their ideas, concepts, and approaches have become the base of the TQM wisdom. Deming "is probably the person who has done most to influence the quality movement." (Sallis, 2002, p.6) Deming's contributions to the quality field are notable and mostly associated with his name as Marouni (2010) describes him "as the father of the modern quality improvement and the total quality movement" (p. 22). A brief summary of his philosophy, approach and contributions of TQM is given next.

Quality Gurus:

W. Edwards Deming He was born 1900 and died in 1993. He is a statistician who earned Ph D in physics. He started his work at Western Electric's legendary

Hawthorne plant in Chicago. At that time, he began formulating his methods of removing variability and waste from industrial processes. He trained in engineering and mathematical physics at the University of Wyoming and then Yale University. Then he moved to the Us Department of Agriculture and the Bureau of the Census. He introduced to Walter Shewhart who worked at the Bell Laboratories in New York (Foster 2010 & Sallis, 2002). Shewhart was a statistician and a physicist who was well-versed in the area of statistic. Shewhart has great influence in Deming's thinking and his work in statistical process control as a means of quality improvement. (Olson, 2009) During the 1930s they work together in developing statistical control techniques that are applied to management processes. Deming believe that it allows the mangers to determine when to intervene and improve or to let the process continue. Shewhart was able to transfer his values to the field of engineering but the leadership was not convinced of his ideas. They found the statistical quality control to be an expensive process post World War II as they had other priorities. Deming adapt Shewhart's statistical quality control methods and got the opportunity to present and teach worker and prove for the government it can be put in practice. (Arcaro, 1995; Kemp 2005) This was during the Second World War when he taught American engineers the statistical process control through the application of PDCA cycle. The engineers learned it but their management did not believe in its value. In 1940, he contributes in U.S census and later he was asked to help in Japan's census in 1950. During his visit to Japan, he presented his first lecture on statistical quality control in the Union of Japanese Scientists and Engineers and a member of the union invited him to come back but the first class was only for the leaders of the largest electronics and manufacturing firms in Japan. He admired the Japanese's hierarchical and cohesive

culture. He understood their desperate need of transform as a result of their suffering in postwar conditions. In fact, he was interested in helping them in the transformation process (Kemp, 2005). Deming believes that workers are not responsible for the defect in the product but the managers are responsible. According to Farooq, Akhtar, Zia Ullah & Memon (2007) Deming believes that management creates the system in the organization and people are working in a system. If we are assessing workers performance 85% through the system while 15 % is determined by shortage of skills “Workers aren't bad but the system is not perfect” (p.88). He works as a consultant to Japanese organizations his plan was to change the quality of their production in order to change consumers' perceptions that “Made in Japan” meant junk. They use his methods and within four years the customer demanding Japanese products. (McClain 2003).

Bonstingl (1996) stated that “Deming drove home the point that, without the full support of top- level management, the quality revolution of the Japanese industry, so desperately needed, would be doomed from the start” (As cited in Hernandez, 2001, p 16). Joseph Juran like Shewhart and Deming had degrees in electrical engineering and worked for Western Electric. He worked with Deming in Japan during the 1950's to applied statistical process control in the area of quality management (Ali and Shastri, 2010). Juran's focus was stated by Yong and Wilkinson (2002) the emphasis on “the need for quality control to have the understanding and support of top and middle management”(p.112). Sallis (2002) describes Juran's contribution in Japan “along with Deming, is the main veteran pioneer of the quality revolution” (p.42) His influence on the Japanese business culture is clear as his quality theories were the basis for traditional quality systems and include; Juran's Quality Trilogy, Quality Planning Roadmap, and 10

Steps to Quality Improvement. His focus was in improving the processes through quality planning and control. His concepts form the basis for organizational planning and process to achieve the quality. (Schwass, 2010)

Deming's philosophy was based on a systematic approach to problem solving which is now recognized as the Plan, Do, Check, Act (PDCA) cycle.

Demings' 14 point:

His philosophy was also built up on his famous fourteen points. "Deming is best known for his 14 points of quality management that help individuals understand and implement quality improvement through both management and employee involvement" (Helms, Iams and Nixon, 2001.p. 2). They represent the core values of his theory of total quality management and they are:

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.
2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.
3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

6. Institute training on the job.
7. Institute leadership (See point 12). The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.
8. Drive out fear, so that everyone may work effectively for the company.
9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product of service.
10. Eliminate slogans, exhortations, and numerical targets for the work force asking for zero defects and new levels of productivity.
- 11 a. Eliminate work standards (quotas) on the factory floor. Substitute leadership.
 - b. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.
- 12 a. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.
13. Institute a vigorous program of education and self-improvement.
14. Put everyone in the company to work to accomplish the transformation. The transformation is everybody's job. (Deming, 1986 As cited in Hernandez, 2001 p. 209-210).

The 14 points represent a conceptual framework for quality management that can ensure the success if they are followed and well implemented. To ensure their effectiveness, Deming felt there are seven points that should be avoided. He calls them

the deadly disease. According to Foster (2010), they could hinder the achievement of top quality and competitiveness and they are:

1. Lack of constancy of purpose.
2. Emphasis on short-term profits.
3. Evaluation of performance, merit rating or annual review.
4. Mobility of management.
5. Running a company on visible figures alone.
6. Excessive medical costs for employee health care.
7. Excessive costs of warranties. (P.66)

They are considered the main barriers that stand in the way of quality improvement. Deming is well known of his 14 points of management transformation. According to Reid (2008), all the quality theories can "trace their foundation to the teaching of Deming and his 14 points" (p.48). Quality award systems were created upon the principles of his points, like the Malcolm Baldrige criteria and the Michigan Quality Lighthouse Awards. (Schwass, 2010). His ideas are related to business context. However, they express essential principles. Deming's philosophy highlights quality in human terms in the sense of change of the system. In other words, he sees quality when work force is committed to do a good job. Quality will flow naturally in an organization that has a committed managerial process for quality. He strongly believes in using the statistical techniques to improve the product and the output. The commitment of top management is emphasized in Deming's theory as Ho and Wearn (1995) stated, "without total dedication from the top...the chances of effective promulgation of [TQM] concepts throughout the organization are unlikely, and the necessary change to management and work attitudes

would be difficult to achieve” (p. 28). Deming has his own experience that proves this. As a result of this he started his work in Japan with the electronics and manufacturing firms leaders. He believes that they are capable of implementing the needed changes to achieve the quality. Foster (2010) state that Deming believes that customer’s demand for quality is the greatest motivation for the firms to provide it. The more they ask for it, the more firms will aspire to a high level of performance. Deming’s philosophy involves long term commitment to excellence. It includes goal setting, problem solving and working together instead of pointing to the cause of the problem. He emphasizes a methodical process for creating a system that is based on planning and implementing continuous improvement in quality to meet the customer’s requirement and expectation which can be achieved through commitment leadership and monitoring of the process. The leaders’ responsibility is to utilize the core ideas and concepts of TQM to achieve success, and a high level of quality. Deming’s theory was adopted and became a way of life in Japan and quality became the continuous focus for everyone in Japan. Deming advocate the ideas but it was Japan’s commitment to put it in practice which turned their country into an economic giant. Deming is admired by the Japanese for his efforts in revitalizing their industry. As a mark of respect, they created a prize that carries his name. The Deming Prize is given to an individual for achievement in statistical theory, and to companies for accomplishments in statistical application. It is a silver medal engraved with a profile of Dr. Deming. Toward the end of his career, Deming wrote books, publish articles, taught class and give seminars to educate people of his approach and ideas. That might be the reason why his name is associated to the term “quality”.

While the Japanese were reaping the fruit of their success, America and Europe were lagging behind. The Japanese implemented Deming's theory and in less than five years they were exporting high quality goods all over the world. However, the American industry was in trouble and the solution was in the Japanese management method. Many American companies such as Xerox, Ford Motor consulted Deming who was 80 years old and asked him to guide them to improve their product. That was the beginning of a vigorous period of progress in quality in America and overall the world. Yong and Wilkinson (2002), describe the process of retrieving quality improvement program "Western firms have had something of a 'born again' experience with quality management, following the realization by the 1970's that the Japanese economic miracle posed a competitive threat, and this sparked off strong interest in Japanese management techniques" (p. 114). The Japanese applied TQM to different fields starting from manufacturing, engineering, banking, health and education. The rest of the world was watching and when it proved it success they started to copy it in their countries. They developed the quality concepts by using the Americans' initiative's ideas and made their own contributions to this theory.

Total Quality Management and Education:

The future of any nation is shaped in classrooms. The national goals cannot be achieved without educational development. Therefore, the most important and urgent reform needed in education to achieve national goals. In a world of competitive environment, adopting changes in education provided has become essential to boost economic growth as an ultimate end. The most important element that helps to adopt the

change was the criticisms from the stakeholders to education with respect to coping with the ever-changing market situations, socio-economic conditions and stiff competition worldwide. School does not provide education and knowledge within the classroom but also promote the generations to take command of the processes of change and development as the school is a place of leadership with regard to knowledge and human behavior. It requires developing strategies and specific goals with clear standards and benchmarks in line with the perspective of the overall quality. Quality Education in schools and colleges will lead to qualified human resources moving to higher education where highly qualified manpower will be produced for demanding careers. For this purpose; education has witness a lot of calls for reform during the last decades. There are a lot of programs and approaches but they lack the coherent systematic plan or structured process to implement these reforms. Educational organizations that produce learning which is integrated into everything people do. Sangeeta, Banwet, & Karunes (2004) consider education system as a transformation process comprising of inputs of students, teachers, administrative staff, physical facilities and process. The processes include teaching, learning, and administration. Outputs include examination results, employment, earnings and satisfaction. Through the process of learning people become able to do new things, increase their ability to produce and create. Moreover, they can communicate and be a part of the life process. Therefore, learning organizations are playing a vital role in the development of the societies. Sakthivel; Rajendran, & Raju,(2005). claimed that “there is a strong correlation between a country’s competitiveness and the quality of education provided within that country” (574). People,

organization and countries that gain high level of education for sure will be the most successful in the future.

According to Venkatraman 2006, "Quality of education is becoming important in the world of competitive environment. There is definitely a need to adopt change in the educational processes in order to improve and stay healthy in the business of education" (p.97). Educational improvements are inevitable in the changeable world. According to Ali and Shastri (2010), "Total Quality Management (TQM) is inevitably a common factor that will shape the strategies of...educational institutions in their attempt to satisfy various stakeholders including students, parents, industry and society as a whole" (p.9). Sustained these educational improvement depends on the nature and the quality of the leadership. Quality as a theme spreads rapidly within the educational system. Literature available, points to a growing interest in applying TQM in education and for a wide variety of reasons. Some of the reasons include; pressures from industry for continuous upgrading of academic standards with changing technology; government schemes with allocation of funds, which encourage research and teaching in the field of quality; increasing competition between various private and government academic institutions; and a reduction in the pool of funds for research and teaching, implying that only reputable institutions will have a likely chance of gaining access to various funds. (Thakkar Deshmukh, & Shastree, 2006; Temponi 2005).

There was a debate regarding the implementation of TQM in the field of education where some educators refuse it as it was create in the business domain. On the other hand some educators believe it can prove its success and they should give it the opportunity to prove this. There are a lot of studies which cover this topic especially in

higher education. There is a debate as to how embroiled higher education should be in a market driven model of TQM. The debate of TQM implementation in education “is not about its usefulness, but about the scope, focus and viewpoint of TQM that should prevail to drive improvement.” (Flumerfelt, & Banachowski, 2011, p.224). In implementing TQM in higher education, one needs to realize that higher education is different from other service industries, particularly in relation to measurement of organization performance. Basically, in higher education, student assessment is considered as an indicator of performance. Therefore, some reviewer in suggesting the TQM for higher education focused on student assessment asserted that these quality systems will improve the student’s academic achievement. But when we consider the students’ roles in higher education, we notice that students have multiple roles and their roles cannot be simplified to that of a customer (Mehralizadeh, & Safaeemoghaddam, 2010).

Fisher, Elord and Mehta (2010) developed a measurement instrument based on Deming’s 14 Points that was recommended to managers who wished to improve efficiencies and gain a competitive edge in quality management. This instrument is not only have a guided method of where to start to employ quality management principles, but they also have a method by which to measure the outcomes of their efforts, make improvements in their implementation, and maximize a positive outcome. Thakkar, *et al* (2006) claim that, the philosophies of TQM in the educational institutions need to be adapted to accommodate the intangible aspects of student learning as this theory deals with tangible processes of the goods or services in industry while in education what happens in the classroom is intangible. They suggest that continuous improvements are the most common philosophies that have direct implications for teaching and learning in

education as it stresses teamwork, finding better ways to do things, sharing responsibility and dramatically improving institutional cultures. Williams (1994) confirms that TQM as a process of creating an environment in which management and workers strive to create an organizational culture, which helps to achieve the goal of creating the highest possible quality in products and services for the purpose of customers' satisfaction. According to Chase, Aquilano, and Jacobs (2001) service quality are hard to define and measure. It is possible, however to find out what's important to the customer and then create the kind of organizational culture that motivates and enables the worker to deliver a quality service.

TQM philosophies in the field of education according to Venkatraman, (2007), "need to be adapted to accommodate for the intangible aspects of teaching and learning that forms the core functions of education. Such a tailor-made approach could lead to successful implementation"(p.108). In the classroom, as Bostingl's(1995) noted that teacher-student teams collaborate to produce continuous improvement in the work they do together. The end product of this work is the development of student's competence, character and capabilities. Tranfield, Duberley, Smith, Musson, and Stokes, (2000), suggesting that if learning takes place within the organization and employee are encouraged to provide feedback to evaluate performance, enabling the outcomes to be incorporated into the knowledge base within the organization, continuous improvement will be achieved. TQM is the mutual co-operation of everyone in an organization and associated business processes to produce products and services, which meet the needs and expectations of customers. Oldfield and Baron (2000) emphasize that: "Institutions should address the issues of quality, not only through the traditional routes of accreditation and course review, student feedback questionnaires on quality of course

delivery and teaching, but also through evaluating what students themselves consider to be elements in service quality” (P. 85)

Terziovski, Howell, Sohal, and Morrison, (2000) carried out field research to examine the mutual dependence between TQM and the learning organization. They concluded that the success of the companies’ quality programs was due to the sustained commitment to “learning” and will involve the process of building procedural knowledge, cognitive strategies and attitudes. Hofman, Dijkstra, and Adriaan Hofman, (2008) claim that in school of advanced quality management “schools’ curriculum content, available learning time, (a positive) school climate and availability of good systems for pupil support are more in line with the standards of the Inspectorate of Education than in other schools” (P.298). According to Tierney (1998) (As cited in Sakhivel, Rajendran, & Raju, 2005, p585), Student learning, the ultimate measure of academic quality, would improve if students feel more secure about where they are headed and how the college is taking them there. TQM is “the process of changing the fundamental culture of an organization and redirecting it towards superior product or service quality” (Gaither, 1996, as cited in Ali and Shastri, 2010, p.10). This is consistent with Ehigie, and Akpan, (2005) claim that, the management philosophy of TQM if it followed another management technique to the implementation of TQM, everyone in the organization needs to change the previous ways of doing things otherwise its principles would only exist in theory but not in practice. Leadership plays a vital role in its implementation and according to Osseo-Asare, Longbottom, and Chourides, (2007), leadership in education has been identified, “as the prime driver of critical factors for achieving academic excellence” (p.542).

Learning Environment:

The learning environment is a term that encompasses the school building, classrooms, facilities, equipments, culture, attitude, behaviors,... that are available or take place inside school context. It is identified according to Lee and Tsai (2005) as “the social-psychological contexts within which learning occurs” (p.162). Through the social interaction that takes place between learning and the surrounding environment, learners are influenced by many things that may affect their acquisition processes or learning. (Illeris, 2004). For this reason, educators must give more attention to the learning environment and try to enrich it as much as possible to ensure that learning take place in an attractive way. According to Allison and Rehm (2007), opportunities to interact with the environment through hands-on experiences, simulations, demonstrations, and field trips allow students to be actively engaged in the learning process. According to Goh, and Khine,(2002),“constructivist learning environment is meaningful learning and is a cognitive process in which individuals make sense of the world in relation to the knowledge which they already have constructed, and this sense-making process involves active negotiation and consensus building” (p. 5). This provides a guideline for all educators who need to provide a meaningful educational environment for education to occur. It is important to design learning activities that allow the students to explore their environment inside and outside their school. The connection between the theory in classroom and the application of this theory will support the learning. This will make the learning meaningful and useful. Moreover, using different senses will ensure retention of the information for a long time. Woolfolk (2001) claims that teachers need to be creative in designing challenging tasks and that the learning tasks must be authentic. He adds that

classrooms must be organized and the teachers need to be patient and supportive to encourage actual student learning. This is consistent with Herrington & Herrington, (2006) who believe that teacher must carefully create and compose the activities that comprise the work of the learning environment.

The learning environment plays a vital role in evaluating educational programs as there is a consistent association between the classroom environment and students' outcomes. How schools function is highly important for explaining differences in achievement between the students of different schools. According to Opdenakker and Damme (2006), having a look at what is happening inside schools (school practice) and trying to get insight into how a school's practice is established seem to be promising directions to improve schools' practice and the schooling of children.

According to Fullan (2000), most schools' reform efforts have created overload and fragmentation which continues to drive us from the issue in focus, that is teaching and learning. For this purpose, educational systems around the world have encountered great challenges and changes in relation to reforms in public education. The aim of these reforms according to Hopkins and Levin (2000) must be developing more effective schools and raise levels of student achievement. The ultimate goal for all the changes is to improve the school effectiveness and to improve the overall learning process. The learning process can affect the students' learning but school environment is affected by the external environment of the society as a whole. Moreover, it is a matter of fact it is a reflection of it. Srivastava, and Frankwick, (2011) state that the organization's internal behaviors and functioning is affected by the changes in the composition of customers and their preferences therefore an aligning of strategies and processes to the environmental

context can be important for improving organizational performance. According to Cooper (1993) and Townsend (1994) school effectiveness can be defined as congruence between objectives and achievements. Many studies, especially in the US, use quantitative assessment of student achievement and measure achievement according to student academic outcomes and the concept of the value added by the school. Leonard, Bourke and Schofield (2004) consider that effective measures are important components of school effectiveness and quality assurance as well as their enhancement being linked to implementation of school reform and improvement.

The learning or the change in behavior that is needed in schools cannot be achieved without the culture of continuous improvement. Ahmed, Loh, and Zairi, (1999) emphasized that learning and continuously improving companies/institutions requires an organizational culture to guide the employees. A collaborative school environment is described by Harris (2003) as a place where: “teachers get support, share good practice, communicate and collaborate with each other, learn from each other, and where teachers trust and respect each other, thus, where professional development can be established and teachers can participate in the decision making, leads to positive relationships” (p.378). From his point of view, this kind of environment is very important for achieving real improvement in classroom practice. More importantly, Hopkins (2002) believes that it is essential for enhancing the effectiveness of teaching and learning. Fisher (2006) considers improving the learning environment the starting point of many reform movements that aims to improve student achievement.

A quality school environment is best described by Huffman & Hipp (2003) that it is a school “involved in sincere efforts to broaden the base of leadership to include

teachers and administrators, to define shared vision based on student learning, and to provide a culture of continual support”(p.148). They further assume that school with these characteristics will make great strides in becoming learning organization and addressing critical students’ need. According to Parkay and Stanford, (2007),in a quality atmosphere students believe that they can learn, and are convinced that teachers care about them, understand their differing needs and abilities, have knowledge of their subject matter, and are able to maintain effective classroom discipline. Furthermore, they believe there are three important dimensions of a positive learning environment including the caring atmosphere of the classroom, the physical classroom environment, and the organization of the classroom. Schools with quality learning environments tend to be active places where students are engaged in what they are studying and exploring. The quality of the learning environment is not tested by where the students end up at the testing time, rather it is concerned if the students are stimulated in the education situation and engaged in learning. Furthermore, students need to be able to use the theories of learning in their daily life. The school environment needs to be more conducive to students’ needs, where all are addressed and treated fairly and equally, accomplishments are celebrated in a positive atmosphere where every child feels proud to belong. The school environment has been described by Freiberg (1999) as “The heart and the soul of a school it is about that essence of a school that leads all school members to love the school and look forward to being there each day” (p.22). They believe that it can define the quality of a school that creates health learning places.

Features of an Effective Learning Environment

From the literature explored many studies have identified features that are essential when delivering quality programs and elements that are necessary to ensure effective learning environments. A resounding theme in the literature is the need for appropriate leadership which is committed to continuous improvement and supportive of the teacher's role within the learning environment. Conversely, teacher's qualifications and professional development play an important role to this end. According to Mulaughlin and Talbert (2006), "effective schools and classrooms require teacher professionalism that embraces new norms and expectations for student's learning. Its service ethic will guide relations with students and colleagues. Its hallmark will be a commitment to lifelong professional learning and collective responsibility for improved student learning" (p.2). Accordingly, changing in daily practice, commitment to learn together, collaboration and shared vision are the base the effectiveness of the schools. School member collaborative teamwork that is "label and engage in learning will increase and enhance the professional's knowledge, skills, and effectiveness" (Hord, and Sommers , 2008, p.145). According to Maguire and McKelvey (1999) effective learning environments tend to promote learning and leadership at all levels where everyone in the school is a responsible agent working towards a shared vision, exploring possibilities and taking initiatives and accepting responsibility for their action leads to school accountability. School accountable for students learning according to Mulaughlin and Talbert, (2006) is where "the learning of all students becomes the responsibility of all faculty, rather than individual teachers only" (p.7-8).

Multiple sources identify shared visions, collaboration of the whole school members, trust and staff learning as important factors in creating an effective learning environment. Collaboration and trust as well as distributive leadership according to Muijs et al (2004) have been found to be related to effectiveness in schools in difficult circumstances.

Creating and sustaining the culture that is needed to increase student learning cannot be achieved without shared leadership. Hord, and Sommers, (2008) emphasize the leadership role by stating that “without leadership, there will be difficulty creating a common vision and developing shared leadership. Principal and teachers are inextricably linked. High-quality professionals deserve great leadership” (P.144).

According to Daniels (2001) the learning environment includes all the tools, resources, and people that are part of any particular learning experience, therefore the tools and the resources are important to facilitate learning but they are not the main feature of the effective learning environment. Teachers must be qualified in their subject matter, able to use technology, and able to assess students' learning. Moreover, they must treat students equally, inspire learning through passion for the subject. They must have interest that will spread their enthusiasm to the student and will engage them to more learning opportunities.

To sum up, teachers are important element of the effective learning environment and according to Mulaughlin and Talbert (2006) their qualification can affect the learning environment similarly in TQM according to Alvares, (2008) there is a relationship between teachers' qualification and students' achievement. TQM implementation and the effective learning environment create an organizational culture that is characteristics by

shared vision and goals creating the highest possible quality in products and services and responsibility for that.(Venkatraman; 2007 & Williams;1994) The total involvement, trust and collaboration of all members is important element that lead for distributive leadership. As high-quality professionals deserve great leadership, leadership support and collaboration among teachers have a vital role in sustaining the effectiveness of the learning environment as well as they are essential to successful implementation of TQM (Hord, & Sommers, 2008; Huffman & Hipp ,2003; Muijs et al ,2004; Sakthivel, et al , 2005).

According to the shared base of TQM and the learning environment both will ensure a secure safe atmosphere where care and attention are given to student and their needs are met therefore, they will show a positive attitude toward learning, staff are encouraged to provide feedback to evaluate performance, and contribute to the continuous improvement, the final aim will be achieved and that is improvement in the academic results and the educational environment. (Martin, 2005; Mehra, & Rhee, 2003; Parkay & Stanford, 2007; Tranfield, et al ,2000)

It can be suggested that TQM as a leadership theory with its features have much to offer in establishing and maintaining quality as they incorporate the key features that make learning environments effective.

Methodology

Introduction:

This study is conducted in the United Arab Emirates in Abu Dhabi. According to the literature review, there is a relationship between the two variables (total quality management and effective learning environment) in different countries around the world but as to the researcher's knowledge there is no similar studies that reveal this relation in the UAE in general and Abu Dhabi Emirate in particular. Both qualitative and quantitative methods were used in conducting this study. A questionnaire was built to gather qualitative and quantitative data. According to Gay, Mills and Airsian (2009), "quantitative research uses numerical data to describe or explain the phenomena". However, they describe the qualitative research "as the collection, analysis and interpretation of comprehensive non-numerical data to gain insight into phenomena" (p.7) It aims to report, describe conditions, and investigate relationships to answer questions about the current situation.

This study reports actual opinions of school teachers, vice principals and principals in order to examine the degree to which the features of total quality management are present in Abu-Dhabi high schools and how these principles are used to establish an effective learning environment in the educational organizations.

Research Design

For the purpose of this study, a mixed method approach was selected as the appropriate research approach. This approach according to Creswell (2003), "employs strategies of inquiry that involve collecting data either simultaneously or sequentially to

best understand research problems. The data collection also involves gathering both numeric information as well as text information so that the final database represents both quantitative and qualitative information”(p.18). This kind of approach according to Gay *et al.* (2009) is used to “build on the synergy and strength that exists between quantitative and qualitative research methods to understand a phenomenon more fully than is possible using either quantitative or qualitative methods alone” (p.463).

Participants:

The Population of the Study

There are three education zones (or districts) in Abu Dhabi, each with an independent authority to manage schools (Abu Dhabi Zone, Al Ain Zone, and Western Region Zone). Accordingly, the population of the study consists of: Principals, vice principals, and teachers in public secondary schools in Abu Dhabi, Western Region, and Al Ain educational zones. Cycle 3 include grade 10, 11 and 12 and this represent high schools so when applying the questionnaire in common cycle schools which include other grades beside cycle 3 grades, the researcher only applied the questionnaire to cycle 3 teachers.

According to Educational Statistic First (2010), there are 102 principal (44 in cycle 3 and 58 in common cycle). There are 143 vice principal (70 in cycle 3 and 73 in common cycle). The number of teachers in AEDC is 4471 (2024 in cycle 3 and 2447 in common cycle). (p.52). Table 1 below describes the number of public school staff by role and zone.

Table 1

Number of public school staff by role and zone

Staff Role	Cycle3	Common Cycles	Total
Principal	44	58	102
Vice Principal	70	73	143
Teachers	2024	2447	4471
Total	2138	2578	4716

The source is education statistic first (2010 p.55)

The same source shows that in Abu Dhabi there are 19 female schools (12 cycle 3 and 7 common cycle) and 16 male schools (11 cycle 3 and 5 common schools). In Al Ain there are 27 female schools (8 cycle 3 and 19 common) and 24 male schools (10 cycle 3 and 14 common schools). In Western Region there are 10 female schools (3 cycle 3 and 7 common cycle) and 11 male schools (2 cycle 3 and 9 common cycle) (p.25).

Table 2

Number of public schools by zone, gender, and cycle

Education Zone	Gender	Cycle3	Common Cycles	Total
Abu Dhabi	Female	12	7	19
	Male	11	5	16
Al Ain	Female	8	19	27
	Male	10	14	24
Western Region	Female	3	7	10
	Male	2	9	11

Source education statistic first (2010 p.23)

The Sample:

The researcher use cluster sampling technique where “intact group are randomly selected” (Gay et al 2009, p.129). The researcher identifies the population of the study. Next, the researcher defines the three educational zones. Then the schools were divided according to gender into two clusters male and female. Then schools were selected from an alphabetized list randomly. Last step, was choosing the teachers randomly in each school. The count of the representative sample was around 25% for schools in each educational zone. This percentage of the sample is expected to be generalizable. Cluster sampling is convenient when the population is very large or spread over a wide geographic area. The sample according to this technique is representative to the population from which it is selected from.

Table 3

Number of the sample schools by zone, gender, and cycle

Education Zone	Gender	Cycle3	Common Cycles	Total
Abu Dhabi	Female	4	2	6
	Male	4	2	6
Al Ain	Female	3	5	8
	Male	3	5	8
Western Region	Female	1	2	3
	Male	1	2	3
Total				34

22 questionnaires were sent to each of the 34 schools where 34 questionnaires were addressed to the school principals, 68 to the vice principals and 646 to the teachers. There

were 45 returned questionnaires from both principals and vice principals and 560 questionnaires from the teachers with a response rate of 80%. Out of the 748 questionnaires sent, a total of 143 questionnaires were not returned or not completely answered.

Instruments:

A questionnaire was developed to cover four parts which are as followed:

Part one: This part of the questionnaire provides demographic data about the participants such gender, job, zone, qualification and experience.

The second part of the questionnaire was the TQM items. Based on the review of the related literature, the researcher came up with the most important factors that leaders participate in their leading according to TQM theory. The instrument items were designed based on theories of total quality management. It was built to identify the leaders' real practice of leadership as applied by principals in their schools. The questionnaire was designed to collect data that is related to fourteen overall clusters (Deming 14 points and the learning environment) table 4 shows their distribution.

Table 4

Distribution of questionnaire items on Deming 14 points

Total Quality Management	Deming 14 points	Items representing them on the questionnaire
	constancy of purpose	3,4,5 and 16
	new philosophy	1,13 and 17
	building quality into the processes	55,56 and 57
	improve quality and productivity	12, 15, 18 and 60
	Remove barriers that rob people of pride	10, 46, 48, 49 and 50
	Drive out fear	8,9 and 54
	Break down barrier between departments	14, 51, 52 and 53
	Eliminate slogans	61
	substitute leadership	37, 38 and 58
	Institute leadership	7, 32, 35, 36, 45 and 59
	Institute training on the job	39, 40 and 43
	Institute programmes of education and self-improvement	41, 42 and 44
	End the practice of awarding business on the basis of price alone	11
	The transformation is everybody's job	2, 6, 19, 34 and 47

The third part of the questionnaire was designed to gather data related to learning environment and that part was covered by 13 items on the questionnaire as table 5 shows their distribution.

Table 5

Distribution of questionnaire items on the learning Environment variable

	Items representing them on the questionnaire
Learning Environments	20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, and 33

The last part of the questionnaire is the open ended questions that were used to substitute the interview. This technique of data collection is used here because due to the large number of the sample that cannot be managed by the researcher. The respondents' answers in the open ended questions provide new channels for the researcher to gain

greater insight and depth regarding the elements that construct an effective learning environment.

Validity

To validate the items of the questionnaire and make sure that the questions are understood in the same way the researcher wants it to be the instrument was reviewed by educators and statisticians juries. The feedback provided helped to reconstruct and format the instrument to ensure that the questions are posed in a manner that would be understood as intended by the researcher. The feedback was used to establish the content validity of the questionnaire instrument.

Reliability

Reliability means “whether the means of measurement are accurate and whether they are actually measuring what they are intended to measure” (Golathani, 2003, p.599). According to Field (2005) reliability is based on the idea that individual items should produce results consistent with the overall questionnaire. To establish reliability a pilot test was done on a small sample (n= 61) and the researcher use Crombach’s alpha which is the most common measure of scale reliability.

Table 6

Reliability Statistics

Cronbach's Alpha	N of Items
.973	61

From table 6 the Cronbach’s alpha coefficient is .97 that indicates satisfactory reliability.

Data Collection Procedures

The first step in collecting data for this study was to contact Abu Dhabi Educational Council by a letter that explains the nature of this study and ask for permission that allows the researcher to gather data from the public schools. See appendix (B). The second step was to prepare an alphabetical list of schools names in the Emirate of Abu Dhabi, 25% of secondary and common schools in each zone were chosen. Once the permission was obtained, (748) questionnaires were distributed among (34) schools. There are (605) questionnaires were return. When the questionnaires were returned the responses coded according to the Likert five scale categories to fit the answers in the SPSS (Statistical Package of Social Sciences) for the questionnaire's data analysis. The data collected through the open-ended questions were analyzed by the content analysis technique.

Data Analysis:

The questionnaire tool was used to identify to what extent the TQM is applied as a leadership approach and its effect on learning environment in the schools they lead. The variables related to TQM characteristics were analyzed with descriptive statistics and then later correlated with variables related to the effective learning environment. Descriptive statistics were used to examine the characteristics of the survey sample including the means, and standard deviations, for the various dependent and independent variables. A *t* test was used to compare two means with an alpha level of .05 to determine statistical significance. Analysis of Variance (ANOVA) is the best statistic that can be used as it testing the significance between means of variables and tells us how independent variables interact with each other and what effects these interactions have on the dependent variables. Open ended question responses were categorized in common

themes then they were computed to find out the percentage and the frequency. The data is shown on table forms for the readers in addition some descriptions are offered in the next chapter.

Table 1.1. Demographic Data of the Participants

Category	Sub-category	Frequency	Percentage
Gender	Female	100	42.9
	Male	130	57.1
	Total	230	100
Age	18-24	100	43.5
	25-30	130	56.5
Education	High School	100	43.5
	University	130	56.5
	Total	230	100

Finding and Discussion

This chapter discusses the descriptive statistics and the collected data analysis and it presents general demographic information on the survey participants and information which addresses the research questions.

Demographic Information about the Participants:

Table 7
Frequencies

		Frequency	Percent
Zone	Abu-Dhabi	257	42.5
	Al-Ain	248	41.0
	Western Region	100	16.5
Gender	Male	327	54.0
	Female	278	46.0
Job	Principal of School	45	7.4
	Teacher	560	92.6
Qualification	BA	517	85.5
	Master	84	13.9
	DR	4	.7
	Less than 5 years	52	8.6
Experience	5-10 Years	115	19.0
	10-15 Years	247	40.8
	More than 15 years	191	31.6

Six hundred and five questionnaires were returned from three educational zones. 257 of them were from Abu Dhabi, 248 from Alain and 100 from Western Region. 327 of the participants were males and 278 females. Their degree break shows that Five hundred and seventeen of them were bachelor degree holders, 84 master's degree holders and 4 PhD holders. School principals were 45 while teachers were 560. As for the experience component, the demographic data shows 247 of the participants have between 10 -15 years of experience, followed by the participants with more than 15 years of

experience (191 participants). In third place, was the group of participants with 5-10 years of experience (115 participants). Finally, there were only 52 participants with less than five years experience.

After introducing this background about the respondents, the researcher questions will be discussed in the following part of the chapter.

First Research Question

1. What are the main descriptors of Total Quality Management and to what extent it is implemented in the Abu Dhabi high schools from the school leaders and teachers perspectives?

The first part of this question reflects current literature and previous studies. The most common feature of TQM in education is continuous improvement where the way of doing things changes forever.

There is a continuous improvement which creates a culture of total involvement where employees, students and all stakeholders are actively participating. The total involvement of all stakeholders establishes a common language that helps produce; a common goal, a shared vision, accountability and responsibility.

Moreover, it enhances the uses of team work and empowers the staff to commit to the notion of long-term continuous improvement.

Leadership is essential as it is considered the most critical factor for the successful implementation of TQM. Leaders provide opportunities for all members to be trained in how to implement TQM in their classrooms. The commitment of the top level of

management increases improvement and facilitates students' learning. Moreover, it motivates staff while increasing the effectiveness of the workforce and sustaining a culture of quality. Leadership contributes to improved performance in academic results, thereby transforming schools into quality schools which offer quality education that satisfy customers (stakeholders, students and community as well).

The participants' responses to the items in the questionnaire were used to answer the second part of the first question about the Total Quality Management practices in Abu Dhabi high schools. Those items are representative the of Deming's 14 principles. The researcher used the one sample *t* Test analysis to measure TQM implementations in Abu Dhabi high schools. Table 8 shows the mean score and the standard deviation of the sample.

Table 8

TQM One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
TQM	605	202.17	29.260	1.190

Table 9

TQM One-Sample Test

Test Value = 144						
95% Confidence Interval of the						
Difference						
	T	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
TQM	48.900	604	.000	58.172	55.84	60.51

From tables 8 and 9 the mean and standard deviation are 202.17 and 29.26, respectively. The test value which is 144 comes from multiplying the items (48) that measure the implementation of TQM with 3 which is the neutral response degree ($48 \times 3 = 144$). The differences between the sample mean and the cut point (144) is statistically significant at a level less than .05 where ($t = 48.9$,

sig. = $p \leq 0.05$). That is, there is a statistical significant difference between the two means.

In order to investigate the real implementation of the Total Quality Management theory in Abu Dhabi high schools a test of the implementation for each cluster of the theory is done. A five scale, Lickert questionnaire was used for this which is a ranking scale for the purpose of analyzing each category. It is represented by a range of responses where strongly agree is (4.2-5.00) agree (3.4-4.19) undecided (2.6-3.39) disagree (1.8-2.59) and strongly disagree (1-1.79)

Table 10

Constancy of purpose

		q3	q4	q5	q16	constancy
N	Valid	605	605	605	605	605
	Missing	0	0	0	0	0
Mean		4.4826	4.2810	4.1421	3.8843	16.7901
Median		5.0000	4.0000	4.0000	4.0000	17.0000
Std. Deviation		.67729	.77655	.87248	1.07493	2.66829

Table 10 shows that the total mean of the cluster is (16.7901) where if it is divided on the number of items the result is (4.19) which indicates that the participants agree that the constancy of purpose is implemented in Abu Dhabi high Schools.

Table 11

Adapt the new philosophy

		q1	q13	q17	New philosophy
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		4.5488	4.4347	3.7802	12.7636
Median		5.0000	5.0000	4.0000	13.0000
Std. Deviation		.70219	.69847	1.11415	1.94085

The average mean as shown in table 11 is $(12.7636/3 = 4.25)$ which indicates that participants strongly agree that the new philosophy of TQM is adapted in Abu Dhabi high schools.

Table 12

Building quality on the service

		q55	q56	q57	Building Quality
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		4.3785	4.2347	4.1901	12.8033
Median		5.0000	4.0000	4.0000	13.0000
Std. Deviation		.80594	.88650	.94478	2.27264

Table 12 shows that the average mean is $(12.8033 / 3 = 4.267)$ which indicates that participants strongly agree that quality is built into the service they are providing in Abu Dhabi high schools.

Table 13

Improving the system

		q12	q15	q18	q60	Improve the system
N	Valid	605	605	605	605	605
	Missing	0	0	0	0	0
Mean		4.3587	4.2298	4.1355	4.2430	16.9669
Median		4.0000	4.0000	4.0000	4.0000	17.0000
Std. Deviation		.79022	.88873	.89414	.81712	2.60963

The participants strongly agree that there is improvement in the system that has been implemented in Abu Dhabi high schools as shown in their responses where the average mean is $(16.9669 / 4 = 4.24)$ as shown in table 13.

Table 14

Pride of workmanship

		q10	q46	q48	q49	q50	Pride of workmanship
N	Valid	605	605	605	605	605	605
	Missing	0	0	0	0	0	0
Mean		4.5322	4.1570	4.3653	3.8050	3.8380	20.6975
Median		5.0000	4.0000	5.0000	4.0000	4.0000	21.0000
Std. Deviation		.74209	.90261	.87862	1.32662	1.17938	3.99330

The participants show agreement that they feel proud of their workmanship as their average mean is $(20.6975/5= 4.13)$ as shown in table 14 which indicates strong agreement.

Table 15
Drive out fear

		q8	q9	q54	Drive fear
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		4.1851	4.1785	4.1107	12.4744
Median		4.0000	4.0000	4.0000	13.0000
Std. Deviation		.86628	.86576	.93105	2.22153

Table 15 shows that the participants are agreeing that the fear is driven out from their work place as the average mean of their responses shows 4.13.

Table 16
Enhancement of teamwork

		q41	q51	q52	q53	Enhance teamwork
N	Valid	605	605	605	605	605
	Missing	0	0	0	0	0
Mean		4.1752	4.2182	4.2727	4.2860	16.9521
Median		4.0000	4.0000	4.0000	4.0000	17.0000
Std. Deviation		.88907	.87949	.82189	.77794	2.85453

The participants show strong agreement that this point of the theory of TQM (enhancement of teamwork) is implemented in Abu Dhabi high schools where the average mean of their responses is (4.23) as it can be concluded from table 16.

Table 17
Eliminate slogans

		q61	Eliminate slogans
N	Valid	605	0
	Missing	0	605
Mean		4.4760	
Median		5.0000	
Std. Deviation		.81674	

Table 17 shows that the mean of the participants' response is 4.4 which indicates the strong agreement of the participants upon its implementation.

Table 18

Eliminate use of the quota and work standers by substitute leadership

		q37	q38	q58	Substitute leadership
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		3.9339	4.2314	4.3587	12.5240
Median		4.0000	4.0000	4.0000	13.0000
Std. Deviation		1.20385	.96426	.72693	2.29558

The participants agree that the leadership substitutes the use quota and the work standards in their schools as the average mean of their responses is (12.524 / 3 = 4.12) as table 18 shows.

Table 19

Institute leadership

		q7	q32	q35	q36	q46	q59	Institute leadership
N	Valid	605	605	605	605	605	605	605
	Missing	0	0	0	0	0	0	0
Mean		4.3256	4.2165	4.5669	4.4860	4.1570	4.2380	26.1025
Median		4.0000	4.0000	5.0000	5.0000	4.0000	4.0000	27.0000
Std. Deviation		.81669	.87329	.63629	.72689	.90261	.88374	3.49637

Table 19 shows that the responders strongly agree that leadership is instituted in Abu Dhabi high schools as the average mean of their responses shows (4.35)

Table 20

Training on the job

		q39	q40	q43	Training
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		4.2860	3.8545	4.1603	12.3124
Median		4.0000	4.0000	4.0000	13.0000
Std. Deviation		.90759	1.14452	.92915	2.41544

The total mean for the cluster is (12.3124) as table 20 shows and average mean is (12.3124 / 3 = 4.104) which indicates that the participants agreed upon the implementation of this point in their schools.

Table 21

Instituting programmes of education and self improvement

		q41	q42	q43	Self improvement
N	Valid	605	605	605	605
	Missing	0	0	0	0
Mean		4.1752	4.1322	4.1603	12.4793
Median		4.0000	4.0000	4.0000	13.0000
Std. Deviation		.88907	.97606	.92915	2.38545

Educational and self improvement programs are implemented in Abu Dhabi high schools according to the participants' point of view where table 21 shows that the average mean is (12.4793 / 3 = 4.159).

Table 22

End rewarding on the basis of price alone

		q11	Awarding
N	Valid	605	0
	Missing	0	605
Mean		4.1355	
Median		4.0000	
Std. Deviation		.93043	

The average mean of the responses on this point of TQM is 4.13 as table 22 shows and that indicates agreement on its implementation.

Table 23

Transformation is everybody's job.

		q2	q6	q19	q34	q47	Transformat ion
N	Valid	605	605	605	605	605	605
	Missin g	0	0	0	0	0	0
Mean		3.9124	4.3074	3.8843	4.4248	4.0215	20.5504
Median		4.0000	4.0000	4.0000	5.0000	4.0000	21.0000
Std. Deviation		1.11310	.81867	1.01797	.66341	1.03476	3.44342

This cluster mean is 20.5504 as shown in table 23 and its average mean is 4.11 which indicate that the participants agree that this point of the theory is implemented in Abu Dhabi high schools.

From the previous analysis it can be concluded that there is an implementation of Total Quality Management theory in Abu Dhabi and its features are present in the field of education as all responses of the participants show that there is adoption of new philosophy of TQM. At the same time, it shows there is a constancy of purpose. There is an improvement of the system

that allows them to build quality in education that they provide. They work in teams in a safe environment where opportunities for training and self-improvement are available. The leadership is dispersed and everybody is involved in the process of transformation.

Second Research Question

2. What are the main features of an effective learning environment and to what extent high schools environments in Abu Dhabi are considered as effective by school leaders and teachers?

The features of an effective learning environment are covered in detail in the literature review chapter and here is a brief summary of its main features.

It is an atmosphere of knowledge that utilizes collaborative learning among students and teachers characterized by its reflective dialogue, a focus on students learning, interaction among teachers, and shared values and norms.

In the effective learning environment positive relationships are fostered where teachers root each others' success, in respect, trust and support. An integral part of this success is mentorship as it encourages professional development and establishes best practice and the sharing of ideas.

Teachers in the effective learning environment are committed to lifelong professional learning and held accountable for improved student learning. It is suggested teachers' engagement in learning increases and it enhances their professional knowledge, skills, and effectiveness. Teachers' effectiveness is defined by; their ability to be patient, the demonstration of good professional knowledge in their subject matter, the maintenance of

classroom discipline, and their ability to encourage actual student learning. In addition, they need to be creative in designing challenging tasks that make the learning tasks authentic and provide students with opportunities to interact with the environment through hands-on experiences, simulations, demonstrations, and field trips.

Effective learning environments promote learning and leadership where everyone in the school is involved in its shared vision. It requires staff to explore possibilities, take initiatives and accept responsibility for their actions.

In addition, effective measures are linked to the implementation of school reform and improvement. Leadership gives great attention to improving the learning environment as it believes the starting point for reform movements aims to improve student achievement.

The effective learning environment includes a caring atmosphere and well organized classroom. The physical environment is equipped with maintained facilities that aim to enhance students learning. The general atmosphere of the effective learning environment gives the students the feeling that they can learn and they are surrounded by teachers that care and, understand their different needs and abilities.

As a result this allows students to be actively engaged in the learning process. This aim is only manifested through strong leadership and could not be achieved without leadership.

Finally, the learning environment with these features offers a high quality learning environment, which translates into greater learning opportunities for students and staff.

The second part of question that is about the effectiveness of learning environment of Abu Dhabi high schools answered by 13 items in the questionnaire which cover this part. The researcher used *t* test to best answer and analyze this question statistically.

Table 24
Learning Environment One-Sample Statistics

	N	Mean	Std.	
			Deviation	Std. Error Mean
Learning environment	605	51.51	9.021	.367

Table 25
Learning Environment One-Sample Test

	t	df	Sig. (2-tailed)	Test Value = 39		
				Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Learning environment	34.10	604	.000	12.507	11.79	13.23

For tables 24 and 25, the value of mean and standard deviation are 51.51 and 9.02, respectively. The test value is $(13 \times 3) = 39$ where 13 is the number of items that test the effectiveness of the learning environment and 3 is the neutral responses for participant on the questionnaire. The difference between the sample mean and the cut point is statistically significant at the .05 level where $t = 34.1$, $p < .000$. That is there is a statistical significant difference between the two means. To measure whether the learning environment is effective, the research calculated the effect size using the following formula ($r = \sqrt{t^2 / (t^2 + df)}$) where $(r = \sqrt{34.10^2 / (34.10^2 + 604)}) r = 0.81$ therefore the effect of the learning environment is large based on Field benchmarks. (Field, 2009) Thus, it can

be reasoned out that the learning environment in Abu Dhabi is an effective learning environment.

Third Research Question

3. Is there a statistical significant main effect of zone, gender and job on the implementation of TQM theory in Abu Dhabi high schools?

To answer the third question, A three way Analysis of Variance (ANOVA) was conducted.

Table 26
TQM Descriptive Statistics

Dependent Variable: TQM

Zone	Job	Gender	Mean	Std. Deviation	N
Abu-Dhabi	Principal of School	Male	217.50	8.328	12
		Female	222.27	13.274	15
		Total	220.15	11.404	27
	Teacher	Male	217.54	13.122	134
		Female	211.02	22.418	96
		Total	214.82	17.857	230
Al-Ain	Principal of School	Male	199.44	42.544	9
		Female	213.17	17.589	6
		Total	204.93	34.543	15
	Teacher	Male	197.64	30.860	120
		Female	185.24	30.898	113
		Total	191.63	31.432	233
Western Region	Principal of School	Male	211.00	.	1
		Female	225.00	21.213	2
		Total	220.33	17.039	3
	Teacher	Male	181.27	36.859	51
		Female	202.87	26.440	46
		Total	191.52	33.952	97

Table 27

Tests of Between-Subjects Effects

Dependent Variable: TQM

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	107130.429 ^a	11	9739.130	14.086	.000
Intercept	3078603.629	1	3078603.629	4452.78	.000
Zone	11750.922	2	5875.461	8.498	.000
Job	4295.766	1	4295.766	6.213	.013
Gender	616.726	1	616.726	.892	.345
Zone * Job	1440.404	2	720.202	1.042	.354
Zone * Gender	817.059	2	408.529	.591	.554
Job * Gender	443.702	1	443.702	.642	.423
Zone * Job * Gender	832.693	2	416.346	.602	.548
Error	409993.693	593	691.389		
Total	25245578.000	605			
Corrected Total	517124.122	604			

P<0.05

From table 27 the following results can be concluded:

There is a statistical significance main effect of job on the implementation of total quality management in Abu Dhabi high schools, where $F = 6.213$, with $p < .013$ which is significant at a level less than 0.05

From table 26, the mean of principals was 215.09 and the teachers' mean was 201.13.

This means that principals believe that TQM is implemented in Abu Dhabi high schools more than teachers do where the difference between the two means was significant at a level less than 0.05.

Table 28 shows that there is no statistical significance main effect of gender on the implementation of total quality management in Abu Dhabi high schools, where $F = .892$, with $p < .345$ which is not significant at a level less than 0.05

The same table shows that there is no statistical significance interaction effect between zone, job and gender on the implementation of total quality management in Abu Dhabi high schools, where $F = .602$, with $\text{sig.} < .548$ which is not significant at a level less than 0.05

There is a statistical significance main effect of zone on the implementation of total quality management in Abu Dhabi high schools, where $F = 8.498$, with $p < .001$ which is significant at a level less than 0.05

The factor zone has three levels (Abu Dhabi, Western Region and Al-Ain). Therefore, follow-up should be conducted by using appropriate post hoc test to identify the source of difference between zones. The schaffee test was used as a post hoc analysis and the results are shown in table 28.

Table 28

Post Hoc Tests (Zone Multiple Comparisons)

TQM		Scheffe				
(I) Zone	(J) Zone	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Abu-Dhabi	Al-Ain	22.95*	2.341	.000	17.21	28.69
	Western Region	23.00*	3.099	.000	15.40	30.61
Al-Ain	Abu-Dhabi	-22.95*	2.341	.000	-28.69	-17.21
	Western Region	.05	3.115	1.000	-7.59	7.69
Western Region	Abu-Dhabi	-23.00*	3.099	.000	-30.61	-15.40
	Al-Ain	-.05	3.115	1.000	-7.69	7.59

Table 29
Homogeneous Subsets

Zone	N	TQM Scheffea,b,c	
		Subset	
		1	2
Western Region	100	192.38	
Al-Ain	248	192.43	
Abu-Dhabi	257		215.38
Sig.		1.000	1.000

The post hoc results show significant mean difference at the level of zone between (Abu Dhabi, and Al Ain) and between (Abu Dhabi and Western Region). Table 29 shows that the mean of TQM of Abu Dhabi 215.38 the mean of Al Ain is (192.43) and Western Region is (192.38). There is no difference between Al Ain and Western Region. Thus, it can be concluded that Abu Dhabi Educational Zone is implementing TQM in its high schools more than the other two educational zones (Al Ain and Western Region).

Fourth Research Question

4. Is there a statistical main effect of zone, gender, and job on the availability of the effective learning environment in Abu Dhabi high schools?

To answer this question 3 way ANOVA analysis is used to test the effect of these factors and the relations between them on the effectiveness on the learning environment.

Table 30

Tests of Between-Subjects Effects

Dependent Variable: learning environment

Source	Type III Sum		Mean Square	F	Sig.
	of Squares	df			
Corrected Model	10838.763 ^a	11	985.342	15.250	.000
Intercept	192724.815	1	192724.815	2982.838	.000
Zone	3330.065	2	1665.033	25.770	.000
Job	5.018	1	5.018	.078	.781
Gender	9.662	1	9.662	.150	.699
Zone * Job	45.454	2	22.727	.352	.704
Zone * Gender	142.266	2	71.133	1.101	.333
Job * Gender	20.440	1	20.440	.316	.574
Zone * Job * Gender	68.898	2	34.449	.533	.587
Error	38314.454	593	64.611		
Total	1654228.000	605			
Corrected Total	49153.217	604			

Table 31

Zone

Dependent Variable: learning environment

Zone	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Abu-Dhabi	56.093	.823	54.476	57.710
Al-Ain	46.282	1.091	44.138	48.425
Western	52.999	2.495	48.099	57.899

From table (29), the following can be concluded:

There is no statistical significance main effect of job, gender and the interaction effect between zone, job and gender on the effectiveness of learning environment in Abu Dhabi high schools.

There is statistical significance main effect of zone on the effectiveness of learning environment in Abu Dhabi high schools, where $F = 25.770$, with $p < .001$ which is significant with a level less than 0.05

The factor zone has three sub-factors (Abu Dhabi, Western Region and Al-Ain).

Therefore, Scheffé test was conducted as a follow test post hoc test to identify the source of difference between zones.

Table 32
Multiple Comparisons
Learning environment
Scheffé

(I) Zone	(J) Zone	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Abu-Dhabi	Al-Ain	8.87*	.715	.000	7.11	10.63
	Al	3.32*	.947	.002	1.00	5.65
	Gharbia					
Al-Ain	Abu- Dhabi	-8.87*	.715	.000	-10.63	-7.11
	Al	-5.55*	.952	.000	-7.88	-3.21
	Gharbia					
Western Region	Abu- Dhabi	-3.32*	.947	.002	-5.65	-1.00
	Al-Ain	5.55*	.952	.000	3.21	7.88

Table 33
Learning environment
Scheffé^{a,b,c}

Zone	N	Subset		
		1	2	3
Al-Ain	248	46.82		
Western Region	100		52.37	
Abu-Dhabi	257			55.69
Sig.		1.000	1.000	1.000

The post hoc results show significant main difference at the level of zone between (Abu Dhabi, and Al Ain) , between (Abu Dhabi and Western Region) and between (Al Ain and Western Region). Table 33 shows that the mean of learning environment of Abu

Dhabi is 55.69 which is the highest among the three educational zones. Western Region comes second at a mean of (52.37), while Al Ain comes last among the three educational zones with a mean of (46.82). Accordingly, it can be concluded that Abu Dhabi Educational Zone has the most effective learning environment while Al- Ain educational zone has the lowest effective learning environment.

The Fifth Research Question:

5. What is the relationship between Total Quality Management and the effective learning environment?

From the answer of the third and the fourth question, we notice that Abu Dhabi educational zone implement the theory of total quality management more than the other education zones. It also has more effective learning environment more than the other educational zones from the principals' and teachers' perspective. The correlation between the TQM elements and the learning environment is tested as shown in table 32 and 33

Table 34

Correlation between Learning Environment and TQM(constancy of purpose, new philosophy ,building quality, improve the system, pride of workmanship and fear)

Learning Environment	Constancy of purpose	New philosophy	Building Quality	Improve the system	Pride Of workmanship	Drive out fear
Pearson Correlation	.558**	.564**	.493**	.564**	.525**	.521*
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
N	605	605	605	605	605	605
r ²	0.311	0.318	0.243	0.318	0.275	0.271

Table 35

Correlation between Learning Environment and TQM (enhance teamwork, substitute leadership, institute leadership, training, self-improvement and transformation)

Learning Environment	Enhance teamwork	Substitute leadership	Institute leadership	Training	Self improvement	Transformation
Pearson Correlation	.518**	.555**	.530**	.596**	.542**	.605**
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
N	605	605	605	605	605	605
r ²	0.268	0.308	0.280	0.355	0.239	0.366

From table 34 and 35 the following can be concluded:

The correlation is significant between the learning environment and the TQM elements at a level less than 0.05.

24% of the learning environment variance is attributed to the elimination of the inspection by building of the quality into the processes.

26% of the learning environment variance is attributed to the enhancement of teamwork.

Driving out fear and pride of workplace is affecting the learning environment variance by 27% each.

Instituting leadership is affecting the learning environment variance by 28%.

30% of the learning environment variance is attributed to the elimination of work standards and quota by substitute leadership.

The adaptation of new philosophy, constancy of purpose and the improvement of the system affect the learning environment by 31% each.

35% of the learning environment variance is attributed to the training on the job.

Thus, it can be concluded that there is a correlation between the two variables of this study (total quality management and the learning environment).

The Open-ended Questions

The last part was the open questions where the responses were categorized according to the zone in common themes then they were computed to find out the frequency and the percentage as following:

The First Open-ended Question

1-What are the processes that can be followed continuously to encourage school members for better performance?

Table 36
Responses on the first open question

Zone	Responses	N
Western Region	Material and moral incentives	15
	Encouraging teachers by thanking them and awarding them with appreciation certificates	5
	Working as a team	2
	Internal competitions among teachers	2
	Adopting teachers' ideas	2
	Continuous follow up and performance evaluation	2
	Providing the teachers with opportunities to express and discuss their ideas	1
	Listening to teachers' opinions and discussing those opinions with them	1
	Training the staff on the latest programs and strategies related to their teaching subject	1
	Involving all staff members in the school plan	1

Zone	Responses	N
Al Ain	Awarding recognition certificates	33
	Recognizing best practices	32
	Continuous follow up, encouragement and oral reinforcement by the school principal	22
	Training courses and workshops	17
	Material and moral incentives	15
	Cooperation and presenting teachers' successful experiences	11
	Building teachers' self confidence, supporting them and opening dialogue channels	9
	Periodical meetings	6
	Providing the latest technologies	2
Abu Dhabi	Reinforcement and recognition	8
	Appreciation certificates	5
	Periodical meetings	5
	Professional development training courses and workshops	4
	Material and moral incentives	3
	Exchanging experiences	2
	Encouraging teachers to participate in educational awards competitions	1

Ninety two percent of the responses emphasize incentives and rewards. Recognition and appreciation certificates 91% of participants' responses. Continuous follow up was the choice of 50% of the participant and it was followed by training and professional development which was chosen by 31%. Cooperation and team work and support and teachers involvement come respectively with 22% and 21%. Five percent of the participants' responses went to the use of technology.

This is regarding the participants' point of view of the processes that continuously can be followed to encourage school members for better performance.

The Second Open-ended Question

What actions do you think can help in creating an effective learning environment?

The responses for this question came as follow:

Table 37

Responses on the first open question

Zone	Responses	N
Western Region	Increasing the activities that are connected to educational process and providing needed material.	5
	Taking care of the school building	5
	Raising the competence of the teaching staff and continuous professional development	2
	Caring about educational outcomes and incomes	2
	Following clear incentives standards for the staff	1
	Cooperating and distributing roles among the staff	1
	To make the school an attractive environment for the students	1
	Constant communication between parents and teachers	1
Al Ain	Providing the latest technologies	20
	Involving all stake holders in the educational process including parents	8
	Reducing the teachers' working load	7
	Scientific field trips and having diverse students' activities and scientific clubs	6
	Following the latest methods in teaching and assessment	6
	Focusing on student learning and educational outcomes	5
	Communicating with parents and the community institutions and benefiting from their experience	5
	Providing comprehensive and diverse resources rooms	5
	Using different teaching methods and using the latest technologies	4
	Setting standards for excellence and following up on their results	3
Assigning fixed sites for school activities	2	
Abu Dhabi	Competition	1
	Successful educational management	1
	Involving all stake holders in developing the school and in accomplishing tasks	1
	Developing teachers and curricula	1
	Using the latest teaching materials	1

Most of the participants, (62%) responses stressed the provision and use of technology, while 50% of them chose developing teaching and curricula. Forty percent of participant selected involving stake-holders. In comparison, 32% of the responses chose scientific trips and educational activities. 27% of the responses, indicated the caring for the school building while only 17% focused on students learning. Competition as well as successful educational management all represented 5% each.

CHAPTER V

Summary, Conclusions and Recommendations

The first part of this chapter summarizes and concludes the research findings of this paper, while the second part provides recommendations for practical implementation.

Summary and Conclusions

The finding of the first research question proves that there is implementation of total quality management in the Emirate of Abu Dhabi high schools. Likewise, the findings of the second question show that the learning environment is facilitated with a variety of aids and equipments that enhance students learning and ensure effectiveness of the learning environment. Mehra, and Rhee (2003) noticed that using TQM principles facilitates students' learning and students show positive attitude toward participation and learning in such environment. Martin's study (2005) shows that implementing TQM works to improve academic results and the educational environment. Such schools create a unique structure and instructional programs, gain high test scores and have an encouraging educational environment. Lukhwareni, (2002) findings show that if schools are managed in TQM, their performance will improve, and they will offer quality education. As a result, they will merit the attention of parents and learners alike. As Hewitt-Edmond, (2009) claims parents' a dream of a quality education as a long-term investment and they are looking to build assets in their children's future.

The finding of the third research question show that there is a significant statistical difference amongst zone. This indicates Abu Dhabi education zone implements

TQM principles more than the Western Region and Al Ain education Zone. Moreover, there is significant statistical difference according to the job variable where principals and vice principals implement TQM principles more than teachers. Their understanding and commitment to TQM implementation is vital as shown in the literature. Lukhwareni, (2002) states that top management's commitment to total quality is crucial for its successful implementation. Temponi,(2005) describes the engagement of the administrative and academic system as the roadblock for creating a quality culture and long-term commitment. Similarly, Aly and Akpovi (2001) point out that administrators and staff are the sources of successful implementation of TQM.

The finding of the fourth research question establishes that there is significant statistical difference in the learning environment on the level of zone where Abu Dhabi educational zone has the features of the effective learning environment more than the other educational zones. The correlation between the two variables is clear that the more TQM implementation there is, the more the learning environment becomes effective. Sakhivel; Rajendran, & Raju,(2005) found out that the increase in commitment to continuous improvement of top management and improvement in campus facilities lead to students' satisfaction and more engagement in learning.

In general, for successful implementation of total quality management theory in any educational system that aims for continuous improvement, a qualified leader is needed to carry it out the long-term process of continuous improvement wherein the involvement of everyone is vital. In addition, teachers and non teaching staffs are provided with various opportunities needed for professional development that will enhance their performance. Parents and stakeholders are given opportunities to

participate in the continuous improvements. Student learning is facilitated and academic results are advanced. This theory is driven by customers' satisfaction, which can be guaranteed through top management commitment, support and collaboration which create an effective learning environment that in the long run produces quality education and gains the attention of parents and learners and satisfies them as well.

Recommendations

Based on literature and the research findings, the researcher recommends the following:

- 1- To give more attention to the implementation of total quality management principles in Western Region and in Al Ain especially as the findings show that it lowest among the three educational zones.
- 2- To give the priority to the school learning environment in Al Ain and Western Region as the research findings indicates that some important elements that might affect the process of learning are absent.
- 3- To ensure teachers' involvement in the implementation of total quality management as they are the main source of success and the findings show that principals are aware of total quality management implementation while teachers are not.
- 4- As recommended by the participants, ensure the use of rewarding and recognition as best techniques that can be followed constantly to encourage best practice, incentives and reward schemes needed to be created in order to recognize and encourage best practice.

- 5- Using the latest technology in addition to developing teaching and curricula can help in creating an effective learning environment from the participants' point view therefore, these items must be emphasized in designing the learning environment.
- 6- To prepare a second line of leaders that are committed to total quality management implementation as the findings show that it is a long-term process of continuous improvement and as top management plays a vital role in its implementation.
- 7- To involve more stakeholders in the improvement process and listen to their insight as their satisfaction is the target that should be achieved in the service of education.

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THE UNIVERSITY OF TEXAS AT AUSTIN
DEPARTMENT OF EDUCATION
INSTITUTE FOR EDUCATIONAL RESEARCH
AND POLICY STUDIES

1997-98

APPENDICES

APENDEX

(A)

Survey on Total Quality Management and its Impact on
Establishing an Effective Learning Environment at High School in
Abu Dhabi

English Version

United Arab Emirates University
Faculty of Education
Department of Foundations of Education
Master in Education Program
Leadership Track



Survey on Total Quality Management and its Impact on
Establishing an Effective Learning Environment at High School in
Abu Dhabi

Mouza Saif Al-Ketbi

920322822

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Total Quality Management and its Impact on Establishing an Effective Learning Environment at High School in Abu Dhabi

Please tick the box that best matches your answer:

1. Zone: Abu Dhabi Al Ain Western Region
2. Gender: Female Male
3. Position: Teacher Administrator Principle
4. Educational Qualification: Bachelor in Education Master
PhD Other
5. Years of Experiences 0-3 4-9 10- 14 more than15

Please indicate your choose of the items below where 5 is the most favorable, and 1 is the least favorable.

Strongly disagree (1) Disagree (2) Neutral (3) Agree(4) Strongly agree(5)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	Quality Philosophy					
	In my school					
1.	There is a clear vision and mission statement.					
2.	Everybody participate to state the vision and mission statement.					
3.	The vision aims to improve learning environment.					
4.	There is long-term planning for improvement.					
5.	The plan is reviewed regularly.					
6.	There is commitment from all employees for improving the educational environment.					
7.	Leaders share leadership responsibilities with school members.					
8.	There is a competitive environment.					
9.	There is an openness and trusting culture.					

N	Statements	Students/Learning Focus				
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
10.	I feel proud that I'm a member of this school.					
11.	There is interest in participating in educational award such as Kalifa Award, Hamdan Award ...etc.					
12.	There is focus on the outcome.					
13.	There is a culture of continuous improvement.					
14.	Expert teachers cooperate to share their experience.					
Students/Learning Focus						
In my school						
15.	Regular (Parents- Teachers) meetings are conducted to follow up improvement of students' achievement.					
16.	Parents' feedback on matters such as students' uniform, trips, scholarship...etc are collected.					
17.	Leaders survey the parents' opinions to evaluate teachers' performance.					
18.	Feedback from parents are valued and used to do the needed improvements.					
19.	Student council shares the decision making.					
20.	There is well-maintained cafeteria or canteen that provides healthy food.					
21.	There is well maintained covered and safety playground.					
22.	There is well-maintained covered gym that is equipped with good and safe equipments.					
23.	There is well-maintained swimming pool with maximum safety standards.					
24.	There is well-maintained theater used for school activities.					
25.	There is a nurse and clinic equipped with medical equipments.					
26.	There is well-maintained equipped resource center or library that facilitates learning.					
27.	There are well-maintained equipped laboratories (Science, IT, Language...etc.) that supports students learning.					
28.	There are well-designed classes that allow group-work.					
29.	There are well-designed classes in terms of furniture.					
30.						

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	There is well-designed classes in term of location of windows, light and A.C.					
31.	Classrooms are equipped with different facilities of technology.					
32.	Leaders maintain contacting and encouraging students to indicate their needs.					
33.	Classrooms are always rich with students work or activities.					
34.	Students are encouraged to participate in school activities.					
Leadership, total Involvement and commitment In my school:						
35.	Leader attends classes for teaching observation and evaluation purposes.					
36.	Leader conduct regular meeting with the teachers to evaluate their performance progress.					
37.	Supervisor is involved in the evaluation of teacher performance.					
38.	Clear criteria declared and used to evaluate teacher performance.					
39.	Teachers are encouraged to indicate their professional development needs.					
40.	Leader survey the training needs for teachers from supervisors.					
41.	Professional development is planned in the light of vision and mission of the school.					
42.	Opportunities for training and professional development are provided for all members.					
43.	Leaders are committed to train all school staff on quality issue.					
44.	There are opportunities for staff to adopt the best practice of other schools.					
45.	Leader provides opportunities for all staff to suggest ideas for school improvement.					
46.	Staff suggestions are implemented to improve learning environment.					
47.	There is decision making involvement of everybody in my school.					

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
48.	Leaders recognize employees' suggestions or ideas.					
49.	There is complain and suggestion box.					
50.	Complaints or suggestions forms are reviewed regularly.					
51.	Teachers are always committed to work collectively in the development of the curriculum.					
52.	School members are working collaboratively to achieve better learning.					
53.	Staff shares responsibility to provide an effective learning environment.					
54.	There is a clear culture of partnership that reflects on the learning environment.					
Evaluation						
In my school						
55.	There is a system of continuous assessment of students' achievement.					
56.	There is a system of continuous assessment of school improvement.					
57.	The main goal of the assessment is improvement and not inspection.					
58.	Teachers adopt a clear evaluation plan for implementing continuous assessment.					
59.	The leaders evaluate the performance of the worker in the school regularly.					
60.	The leaders contact service provider regularly to enhance the service level.					
61.	The leaders adopt clear reward system for distinguish practice among students, teachers, parents, community.					

What are the processes that continuously that can be followed to encourage school members for better performance?

.....

.....

.....

What actions do you think can help in creating an effective learning environment?

.....
.....
.....

Any additional suggestions?

.....
.....
.....

Thank You for Your Time and Effort

APENDEX

(B)

Survey on Total Quality Management and its Impact on
Establishing an Effective Learning Environment at High School in
Abu Dhabi

Arabic Version

APENDEX

(B)

Survey on Total Quality Management and its Impact on
Establishing an Effective Learning Environment at High School in
Abu Dhabi

Arabic Version

الأستاذ الفاضل/الأستاذة الأفاضل؛ مدير المدرسة، المدرس بالمدرسة، الإداري بالمدرسة

الاستبانة التي بين أيديكم هي جزء من دراسة بعنوان: " أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة في المدارس الثانوية في إمارة أبوظبي " وهي دراسة تكميلية لنيل درجة الماجستير في القيادة التربوية.

يرجى الإجابة على أسئلة الاستبانة بين أيديكم ليتسنى للباحثة تحديد واقع تطبيق نظام الجودة الشاملة في مدارسكم، والتعرف على خصائص البيئة التعليمية الفعالة التي تثري الميدان التعليمي في إمارة أبوظبي.

تضم الاستبانة ثلاث مجموعات من الأسئلة، المجموعة الأولى تشمل على معلومات ديموغرافية عن المشاركين، والمجموعة الثانية عبارة عن مجموعة من العبارات تقيس مدى :

أ- توافر فلسفة الجودة في المؤسسة التربوية.

ب- الاهتمام بتعليم الطلبة.

ت- القيادة، والمشاركة الجماعية والالتزام.

ث- التقييم

أما المجموعة الثالثة فهي عبارة عن أسئلة مفتوحة تهدف إلى إثراء البحث من خلال آرائكم حول القضايا المطروحة .

مساهمتم بالإجابة عن ما جاء بهذه الاستبانة يمثل أهمية كبيرة لدى الباحثة وبرجاء الاهتمام بالإجابة عن جميع البنود علما بأن المعلومات التي ستحصل عليها الباحثة ستعامل بسرية تامة ولأغراض البحث العلمي شاكرين لكم حسن تعاونكمز

لاقتراحاتكم وتساؤلاتكم، يمكنك التواصل مع الباحثة على البريد الإلكتروني 920322822@uaeu.ac.ae

الباحثة

موزة سيف الكتبي

أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة في المدارس الثانوية في إمارة أبوظبي

أولاً: البيانات الشخصية:

الرجاء تحديد اختيارك بوضع علامة (√) بجانب الخيار المناسب

1. المنطقة التعليمية: أبوظبي العين: المنطقة الغربية:

الجنس: ذكر أنثى

1. الوظيفة: مدير/مساعد مدير معلم

2. المؤهل العلمي: بكالوريوس ماجستير: دكتوراة:

3. سنوات الخبرة:- أقل من 5 سنوات 5-10 سنوات 10-15 سنوات أكثر من 15

ثانياً: عبارات الاستبانة

الرجاء تحديد درجة موافقتك على كل عبارة فيما يلي حيث أن الرقم (5) يرمز إلى أشد درجات الموافقة في حين أن الرقم (1) يرمز إلى أقل درجات الموافقة

(5) أوافق بشدة (4) أوافق (3) غير متأكد (2) لا أوافق (1) لا أوافق بشدة

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق بشدة	غير موافق بشدة
1.	هناك صياغة واضحة للرؤية و الرسالة.					
2.	شارك الجميع في صياغة الرؤية و الرسالة.					
3.	تهدف الرؤية و الرسالة لتطوير بيئة التعليم والتعلم.					
4.	هناك خطة طويلة المدى لتطوير المدرسة.					
5.	هذه الخطط يتم مراجعتها بشكل دوري.					
6.	هناك التزام من جميع العاملين بتطوير بيئة التعليم والتعلم بالمدرسة.					
7.						

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
	تتقاسم قيادة المدرسة المسؤوليات مع أعضاء المدرسة.					
8.	تتسم البيئة المدرسية بأنها بيئة تنافسية.					
9.	تتسم المدرسة بوجد ثقافة الانفتاح والثقة بين أعضائها.					
10.	أشعر بالاعتزاز لانتمائي لهذه المدرسة.					
11.	هناك حماس للمشاركة في الجوائز التعليمية مثل جائزة سمو الشيخ خليفة وجائزة سمو الشيخ حمدان وغيرها.					
12.	هناك اهتمام بجودة مخرجات التعليم بدرجة كبيرة.					
13.	تتبنى المدرسة ثقافة التطوير المستمر.					
14.	يتشارك المدرسون ذوو الخبرة دائما خبراتهم مع الآخرين.					
15.	تتعد اجتماعات دورية بين أولياء الأمور والمعلمين بهدف تحسين مستوى تعليم الطلبة.					
16.	يتم الاستعانة بأراء أولياء الأمور في مواضيع تتعلق بالطلبة مثل الزي المدرسي، والرحلات، والبعثات الدراسية... الخ.					
17.	يتم استطلاع آراء أولياء الأمور لتقييم أداء المدرسين.					
18.	تتمن القيادة المدرسية استجابات أولياء الأمور وتستفيد منها في إجراء التحسينات المطلوبة.					
19.	يشارك مجلس الطلبة في عملية اتخاذ القرار فيما يخص الطلبة.					
20.						

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
	تتقاسم قيادة المدرسة المسؤوليات مع أعضاء المدرسة.					
8.	تتسم البيئة المدرسية بأنها بيئة تنافسية.					
9.	تتسم المدرسة بوجد ثقافة الانفتاح والثقة بين أعضائها.					
10.	أشعر بالاعتزاز لانتمائي لهذه المدرسة.					
11.	هناك حماس للمشاركة في الجوائز التعليمية مثل جائزة سمو الشيخ خليفة وجائزة سمو الشيخ حمدان وغيرها.					
12.	هناك اهتمام بجودة مخرجات التعليم بدرجة كبيرة.					
13.	تتبنى المدرسة ثقافة التطوير المستمر.					
14.	يتشارك المدرسون ذوو الخبرة دائما خبراتهم مع الآخرين.					
15.	تتعد اجتماعات دورية بين أولياء الأمور والمعلمين بهدف تحسين مستوى تعليم الطلبة.					
16.	يتم الاستعانة بأراء أولياء الأمور في مواضيع تتعلق بالطلبة مثل الزي المدرسي ، والرحلات، والبعثات الدراسية...الخ.					
17.	يتم استطلاع آراء أولياء الأمور لتقييم أداء المدرسين.					
18.	تثمن القيادة المدرسية استجابات أولياء الأمور وتستفيد منها في إجراء التحسينات المطلوبة.					
19.	يشارك مجلس الطلبة في عملية اتخاذ القرار فيما يخص الطلبة.					
20.						

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
	توجد كافيتريا أو مقصف بحالة جيدة يوفر الطعام الصحي.					
21.	توجد ساحة مدرسية آمنة، ومغطاة، وبحالة جيدة.					
22.	توجد صالة مغطاة للألعاب الرياضية مزودة بالمعدات آمنة الاستخدام.					
23.	يوجد حوض سباحة بمقاييس أمن عالية ويتم صيانته بشكل دوري.					
24.	يوجد مسرح مدرسي يخدم فعاليات الأنشطة المدرسية.					
25.	توجد ممرضة وعيادة طبية مجهزة بأحدث الأجهزة الطبية.					
26.	توجد غرفة مصادر أو مكتبة لخدمة عملية التعليم والتعلم.					
27.	توجد معامل متنوعة (العلوم، الحاسوب، معامل اللغات... الخ) لتعزيز تعليم وتعلم الطلبة مجهزة بأحدث الأجهزة.					
28.	تم تصميم الصفوف الدراسية بحيث تتلاءم والعمل الجماعي.					
29.	تم تصميم الصفوف بشكل راق فيما يتعلق بالأثاث.					
30.	تم تصميم الصفوف الدراسية بشكل مناسب فيما يتعلق بالإضاءة وفتحات التهوية والتكييف.					
31.	الصفوف الدراسية مزودة بشتى أنواع التقنيات التعليمية.					
32.						

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
	تتواصل الإدارة المدرسية باستمرار مع الطلبة لمعرفة احتياجاتهم.					
33.	الصفوف الدراسية تزخر بأعمال وأنشطة الطلبة.					
34.	يتم تشجيع الطلبة على المشاركة في الأنشطة المدرسية.					
35.	يحضر المدير بعض الحصص بهدف ملاحظة وتقييم الأداء التدريسي.					
36.	يعقد المدير اجتماعات دورية مع المعلمين للوقوف على مدى التحسن في أدائهم.					
37.	يشارك الموجهون في تقييم أداء المعلمين.					
38.	تعلن وتستخدم معايير تقييم واضحة في تقييم أداء المدرسين.					
39.	يتم تشجيع المدرسين على تحديد احتياجاتهم من برامج التنمية المهنية.					
40.	يتم استطلاع آراء الموجهين لتحديد الاحتياجات الفعلية للتنمية المهنية للمدرسين.					
41.	يتم التخطيط لاحتياجات التنمية المهنية في ضوء الرؤية والرسالة.					
42.	تتوافر فرص متساوية للتطوير والتدريب لجميع الموظفين.					
43.	تلتزم القيادة بتوفير التدريب الخاص بقضايا الجودة لأعضاء الهيئة الإدارية والتدريسية.					
44.	تتاح الفرصة للموظفين للاستفادة من التجارب الناجحة أو خبرات الآخرين.					
45.						

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
	توفر القيادة الفرصة لجميع الموظفين لطرح أفكار تهدف لتطوير أداء المدرسة.					
46.	يتم تنفيذ مقترحات الموظفين لتطوير بيئة التعليم والتعلم.					
47.	تتاح الفرصة لجميع أعضاء المدرسة للمشاركة في اتخاذ القرار.					
48.	يقدم المدير الشكر الموظفين لتعزيز مشاركتهم بالأفكار البناءة.					
49.	يوجد صندوق للشكاوى والمقترحات.					
50.	يتم أخذ الشكاوى والمقترحات بعين الاعتبار.					
51.	يلتزم المدرسون بالعمل الجماعي لتطوير مناهج التعليم.					
52.	يعمل أعضاء المدرسة بشكل تعاوني بهدف الحصول على تعليم أفضل.					
53.	يتشارك أعضاء المدرسة المسؤولية في توفير بيئة تعليمية فعالة.					
54.	توجد ثقافة الشراكة المجتمعية بشكل واضح في البيئة المدرسية التعليمية.					
55.	يوجد نظام تقييم مستمر و فعال لقياس أداء الطلبة.					
56.	يوجد نظام تقييم فعال ومستمر لتقييم أداء المدرسة و تطورها.					
57.	يهدف التقييم عادة إلى التطوير وليس البحث عن الأخطاء الفردية.					
58.	يتبنى المدرسون خطة تقييم واضحة لتطبيق التقويم المستمر.					

م	العبارات	موافق بشدة	موافق	غير متأكد	غير موافق	غير موافق بشدة
59.	تقوم الهيئة الإدارية بتقييم أداء العمال في المدرسة بشكل دائم.					
60.	تتواصل الهيئة الإدارية بشكل دوري مع مزودي الخدمات لتطوير مستوى الخدمات في المدرسة.					
61.	تعتمد إدارة المدرسة نظام تكريم الممارسات المتميزة في فئات الطلبة، المعلمين، أولياء الأمور، والمؤسسات المجتمعية					

ما الأساليب التي يتم إتباعها لتشجيع أعضاء المدرسة على تحقيق الأداء الأفضل وبشكل مستمر؟

.....

.....

.....

من وجهة نظرك ما هي الإجراءات التي تؤدي لتحويل البيئة المدرسية إلى بيئة تعليمية تعلمية فعالة؟

.....

.....

.....

هل توجد لديكم مقترحات إضافية؟

.....

.....

.....

شاكرين لكم حسن التعاون،،،

Appendix
(C)

Request of Consent Letter

التاريخ: 2011/05/18

المحترم
الأستاذ الفاضل/ محمد سالم الظاهري
المدير التنفيذي لقطاع عمليات المدارس
السلام عليكم ورحمة الله وبركاته

بدايةً يطيب لنا أن نتقدم لكم بأطيب تحياتنا متمنين لكم ولمجلس أبوظبي للتعليم كل التوفيق والنجاح في الارتقاء بالعملية التعليمية التعلمية، هذا وفي إطار التعاون الدائم بين مجلس أبوظبي للتعليم وكلية التربية بجامعة الإمارات العربية المتحدة، نود إفادتكم علماً بأن الطالبة/ موزة سيف غميل الكتبي، مسجلة في برنامج الماجستير تخصص "القيادة التربوية"، وتقوم بإعداد رسالة الماجستير تحت عنوان "أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة في المدارس الثانوية في إمارة أبوظبي بدولة الإمارات العربية المتحدة" لذا نرجو التكرم بالموافقة على تسهيل مهمتها البحثية.

شاكرين ومقدرين حسن تعاونكم.

هذا وتفضلوا بقبول فائق التحية والتقدير.

منسق برنامج الماجستير

أ.د. محمد أحمد عبد الدايم



Appendix
(E)
Consent Letter



مجلس أبوظبي للتعليم
Abu Dhabi Education Council
التعليم في أبوظبي

مكتب المدير

الرقم: ١٠٣ / ١٨٣٩

التاريخ: 30 / 5 / 2011م

المهترمين

السادة مدراء ومديرات المدارس الحكومية

السلام عليكم ورحمة الله وبركاته

م/ تسهيل مهمة باحثة

بداية نشكركم على تعاونكم المستمر معنا في كل ما من شأنه الإرتقاء بالعملية التعليمية التعلمية عموماً، وتمويل مهام الباحثين على وجه الخصوص، وفي هذا الإطار فإننا نرحو منكم تسهيل مهمة الباحثة/ موزة سيف الكتي - طالبة ماجستير القيادة التربوية في كلية التربية في جامعة الإمارات العربية المتحدة - في تطبيق أدوات دراستها الموسومة بـ "أثر تجني نظام الجودة الشاملة في خلق بيئة تعليمة فعالة في المدارس الثانوية في إمارة أبوظبي بدولة الإمارات العربية المتحدة"، والتي تستهدف من خلالها الهيئات الإدارية والتعليمية والفنية العاملة في مدارس (أبوظبي، العين، والغربية). نرجو منكم التعاون التام مع الزمينة الباحثة، متمنين لها التوفيق في مهنتها هذه.

وتفضلوا بقبول فائق الاحترام والتقدير

محمد سالم محمد الظاهري

المدير التنفيذي لقطاع عمليات المدارس



محمد
عمر صبيح لقوا بسنة

نسخة ل:

- مكتب المدير
- قسم الإدارة التربوية
- قسم البرامج والمناهج- الدراسات والبحوث
- السجل

صندوق بريد: ٢٦٠٠٠، أبوظبي - أ.ع.م، هاتف: ٠٠٠٠ ٢ ٦١٥ ٠٠٠٠، فاكس: ٠٠٠٠ ٢ ٦١٥ ٠٠٠٠، البريد الإلكتروني: info@adec.ac.ae
P.O. Box: 36005, Abu Dhabi - UAE, Tel: +971 2 615 0000, Fax: +971 2 615 0500, Email: info@adec.ac.ae

أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة في المدارس الثانوية في إمارة أبوظبي

ملخص البحث

جذب مفهوم الجودة خلال السنوات الماضية الأنظار كما دفع هذا المفهوم العملية التعليمية لتغير مستمر مما أدى بالمؤسسات التعليمية بالسعي لتحسين مستوى جودة الخدمات التعليمية التي تقدمها. شكّلت فلسفة الجودة وتطبيقاتها في التعليم الإطار النظري لهذا البحث؛ حيث قامت الباحثة بتحديد مفهوم الجودة في الإطار التربوي الملامح الرئيسية لنظرية الجودة الشاملة وتحديد مفهوم وملامح البيئة التعليمية وذلك من خلال الرجوع للمراجع والأبحاث ذات الصلة بموضوع البحث. كما تم استعراض نماذج من مؤسسات تربوية تعتبر نموذجاً لتطبيق نظرية الجودة في مؤسساتها التعليمية.

هدف هذا البحث لرصد التطبيق الفعلي لنظرية الجودة في البيئة التعليمية للمدارس الثانوية في إمارة أبوظبي بدولة الإمارات العربية المتحدة ولدراسة أثر تطبيق هذه النظرية في خلق بيئة تعليمية فعالة. لطبيعة هذا البحث تم الدمج بين الأسلوب البحثي النوعي والكمي حيث صممت أداة بمقياس ليكرت الخماسي بحث تتكون من أربعة أجزاء الجزء الأول وفر بيانات عن ديموجرافية عن المستجيبين والجزء الثاني كان عن "مبادئ دمج الأربعة عشر" في الجودة حيث تمت تغطية هذه المبادئ بعدد من النقاط. أما الجزء الثالث فقط كان عن ملامح البيئة التعليمية الفعالة في حين كان الجزء الأخير عبارة عن أسئلة مفتوحة تهدف إلى إثراء البحث من خلال آراء المستجيبين حول القضايا المطروحة. تم تطبيق هذه الأداة على الهيئة الإدارية والتدريسية في (34) مدرسة في المناطق التعليمية الثلاثة (أبوظبي، والعين، والغربية) في إمارة أبوظبي.

تنوع التحليل الإحصاء للبيانات من الإحصاء الوصفي، واختبار (ت)، وتحليل التباين، بالإضافة لتحليل المحتوى للأسئلة المفتوحة حيث أشارت آراء المستجيبين إلى أهم العناصر المكونة للبيئة التعليمية الفعالة. أظهرت نتائج البحث وجود دلالة إحصائية لتطبيق نظرية الجودة الشاملة لصالح منطقة أبوظبي التعليمية. كما أظهرت النتائج وجود ملامح البيئة التعليمية الفعالة أيضاً المدارس الثانوية لمنطقة أبوظبي التعليمية. لذا فإن البحث الحالي أثبت وجود ترابط بين متغيري البحث (نظرية الجودة الشاملة والبيئة التعليمية الفعالة).



Faculty of Education
Department of English Language
English Language Center

English 101

Final Exam - English 101

Time: 1 hour

Section 1

Multiple Choice

Section 2

Short Answer

Essay

Section 3



جامعة الإمارات العربية المتحدة
كلية التربية
برنامج الماجستير في التربية

عنوان الرسالة:

أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة
في مدارس أبوظبي الثانوية

اسم الطالبة:

موزة سيف غميل سعيد الكتبي

المشرفون:

أ.د. محمد أحمد عبد الدايم
د. عبد الرحمن سالم النعيمي
د. علي سعيد الكعبي

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برنامج الماجستير في التربية

أثر تبني نظام إدارة الجودة الشاملة في خلق بيئة تعليمية فعالة
في مدارس أبوظبي الثانوية

رسالة مقدمة من الطالبة

موزة سيف غميل سعيد الكتبي

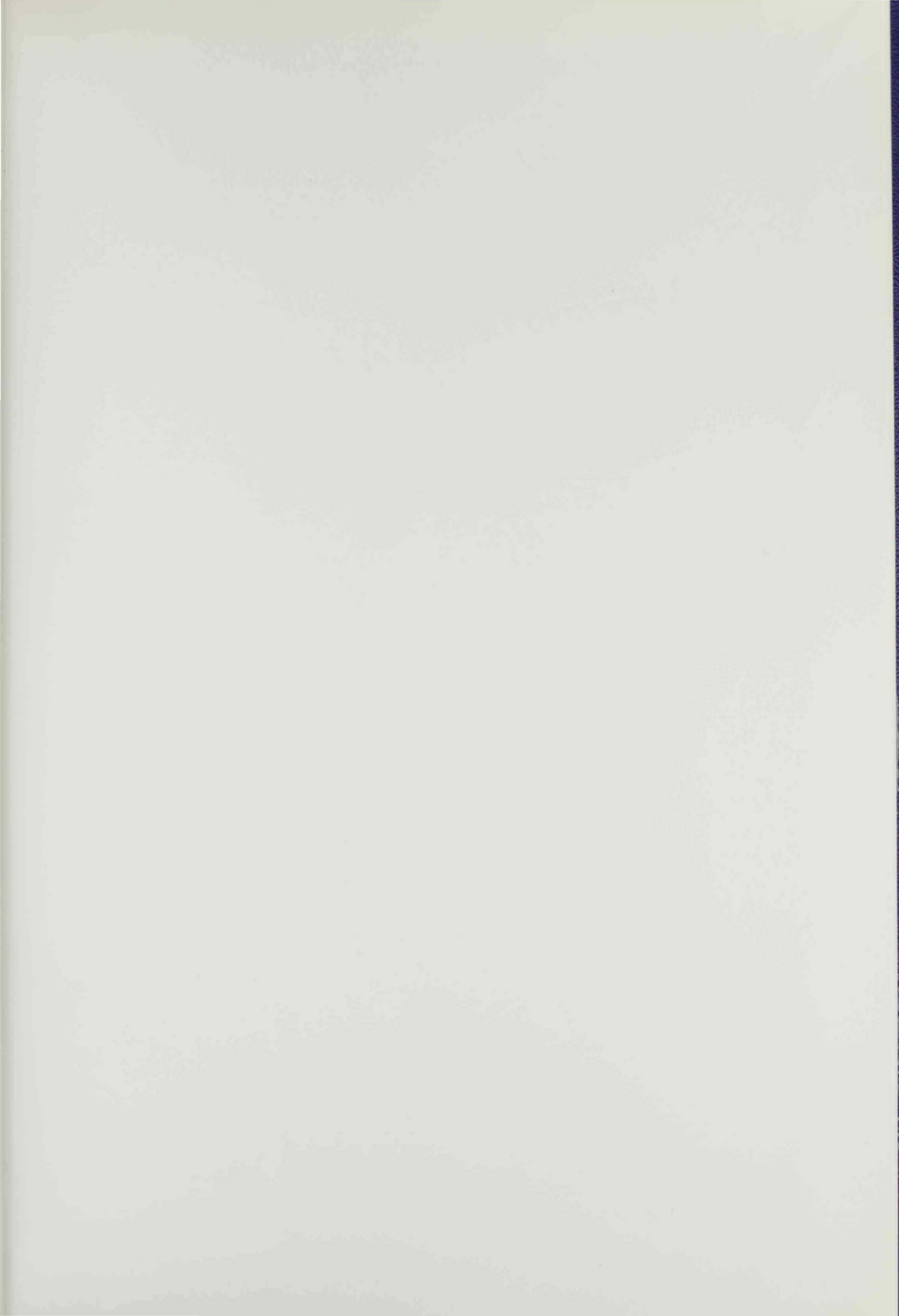
إلى

جامعة الإمارات العربية المتحدة

استكمالاً لمتطلبات الحصول على درجة الماجستير في التربية

"القيادة التربوية"

يناير 2012





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كلية التربية
برنامج الماجستير في التربية

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رسالة مقدمة من الطالبة

موزة سيف غميل سعيد الكتبي

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