

**Analyzing the Relationship between the Learning
Organization Characteristics and their Effects on
Adopting Total Quality Management Criteria**

Applied Study on Jordanian Commercial Banks

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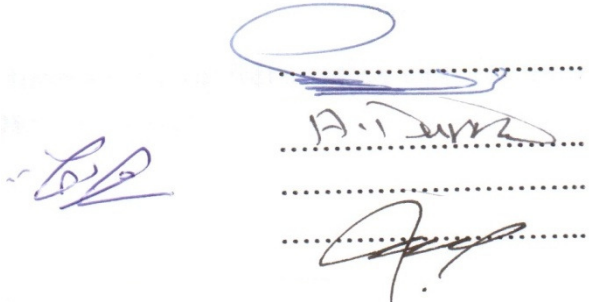
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Eyad Hudaib

DEDICATION

**To my family who guided throughout my entire journey, for their
support and warmth,
to my colleagues and friends in recognition of their value in my life.**

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Analyzing the Relationship between the Learning Organization Characteristics and their Effects on Adopting Total Quality Management Criteria

Applied Study on Jordanian Commercial Banks

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Abstract

The main objective of this study is to analyze the relationship within the Learning Organization characteristics and their effects on adopting Total Quality Management criteria in Jordanian Commercial Banks, through achieving the following:

- 1. Preparing theoretical framework, through understanding the learning organization and total quality management topics.**
- 2. Identifying the importance level of the study variables in Jordanian Commercial Banks.**
- 3. Assigning the relationship within the learning organization characteristics.**
- 4. Exploring the impact of the learning organization characteristics on adopting Total Quality Management Criteria.**

The samples of the study were the employees of Commercial Banks in Jordan who occupy positions such as (General Manager, Assistant General Manager and Administrative & HR Managers) (180).

In order to achieve the objectives of the study, the researcher designed a questionnaire consisting of (64) paragraphs to gather the primary information from the study sample. The Statistical Package for Social Sciences (SPSS) program was used to analyze and examine the hypothesis.

The study used many statistical methods. After executing the analysis on the study hypothesis, the study concluded that:

- The level of importance of Mental Models; Personal Mastery; Team Learning; Shared Vision and Systems thinking in Jordanian Commercial Banks was high.**
- The level of importance of Shared Vision in Jordanian Commercial Banks was medium.**
- The level of importance of Leadership; Strategic Planning; Stakeholders and Market Focus; Staff Focus and Process Management in Commercial Banks in Jordanian was high.**
- There is a relationship between Mental Models and Personal Mastery with value of (0.469**) at level ($\alpha \leq 0.05$).**
- There is a relationship between Mental Models and Team Learning with value of (0.502**) at level ($\alpha \leq 0.05$).**
- There is a relationship between Personal Mastery and Team Learning with value of (0.478**) at level ($\alpha \leq 0.05$).**
- There is a relationship between Shared Vision and Systems Thinking with value of (0.451**) at level ($\alpha \leq 0.05$).**

- **There is a significant impact of Mental Models on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Personal Mastery on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Team Learning on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Shared Vision on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Systems Thinking on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**

الملخص باللغة العربية

تهدف الدراسة الحالية الى تحليل العلاقة بين خصائص المنظمة المتعلمة و أثرها على تبني معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن من خلال تحقيق الأهداف التالية:

- إعداد إطار نظري من خلال الاطلاع على مضامين المنظمة المتعلمة و إدارة الجودة الشاملة.
- تحديد أهمية متغيرات الدراسة في البنوك التجارية بالأردن
- تحديد طبيعة العلاقة بين خصائص المنظمة المتعلمة
- توضيح أثر خصائص المنظمة المتعلمة على تبني معايير إدارة الجودة الشاملة

تكونت عينة الدراسة من كافة العاملين في البنوك التجارية في الأردن و عددهم (180) ممن يشغلون المناصب (المدير العام، مساعد المدير العام، و مديري الإدارات). و لفرض تحقيق أهداف الدراسة قام الباحث بتصميم استبانته تكونت من 64 فقرة لجمع المعلومات الأولية من عينة الدراسة. و تم استخدام الرزمة الإحصائية للعلوم الاجتماعية (SPSS) لتحليل و اختبار الفرضيات و بعد القيام بتحليل بيانات الدراسة، خرجت الدراسة بمجموعة من الاستنتاجات، و أبرزها:

- أن مستوى أهمية منظمة التعلم في البنوك التجارية بالأردن كانت عالية
- أن مستوى أهمية معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن كانت عالية.
- هناك علاقة ذات دلالة إحصائية بين النماذج الفكرية و الإتقان الشخصي بقيمة بلغت 0.469 عند مستوى 0.05 فأقل.
- هناك علاقة بين النماذج الفكرية و تعلم الفرق بقيمة بلغت 0.502 عند مستوى 0.05 فأقل.
- هناك علاقة بين الإتقان الشخصي مع تعلم الفرق بقيمة بلغت 0.478 عند مستوى احتمالي 0.05 فأقل.
- أن هناك علاقة بين الرؤية المشتركة و التفكير النظمي بقيمة بلغت 0.451 عند مستوى احتمالي 0.05 فأقل .
- هناك أثر ذو دلالة معنوية عند مستوى احتمالي 0.05 فأقل للنماذج الفكرية على تبني معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن.
- هناك أثر ذو دلالة معنوية عند مستوى احتمالي 0.05 فأقل للإتقان الشخصي على تبني معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن.
- هناك أثر ذو دلالة معنوية عند مستوى احتمالي 0.05 فأقل للرؤية المشتركة على تبني معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن.
- هناك أثر ذو دلالة معنوية عند مستوى احتمالي 0.05 فأقل لتعلم الفرق على تبني معايير إدارة الجودة الشاملة في البنوك التجارية بالأردن.

فأقل للتفكير النظامي على تبني معايير إدارة 0.05 هناك أثر ذو دلالة معنوية عند مستوى احتمالي
الجودة الشاملة في البنوك التجارية بالأردن.

CHAPTER ONE

STUDY GENERAL FRAMEWORK

(1-1): Introduction

(1-2): Study Problem and Questions

(1-3): Study Hypothesis

(1-4): Significance of the Study

(1-5): Objectives of the Study

(1-6): Study Limitations

(1-7): Study Difficulties

(1-8): Study Model

(1-9): Terminologies of the Study

(1-1): *Introduction*

The idea of *learning organization* was popularized by **Peter Senge (1990)**, in his seminal work *The Fifth Discipline: The Art and Practice of the Learning Organization*. Senge describes a learning organization as a place where people continually expand their capacity to create the results they truly desire, expand new patterns of thinking and nurturing them, collective aspiration is set free, and people are continually learning how to learn together. At the core of the learning organization, there are five essential learning disciplines: personal mastery, mental models, shared vision, team learning, and systems thinking, which are described in this section. Personal mastery has to do with individual learning, and can be seen as the basic building block through the actualization of which the learning organization is constructed. Mental models are about how individuals reflect on their own knowledge, using such models to improve the internal understanding of an organization's functions and processes. Shared vision implies a sense of group commitment to a matrix of organizational goals, while team learning describes a sharing and utilization of knowledge involving collective thinking skills. The purpose of systems thinking is to understand relationships and interrelationships, as well as the context and the forces

that affect the behavior of a system or organization. For the early half of the 1990s, the idea of learning organization has been criticized as the mere re-incarnation of earlier ideologies, such as organization development and total quality management (Rasmussen, 1997)

Organizations are Highly required to be learning systems if they wish to thrive in dynamic business arena. The ability and rate at which organizations can learn and react more quickly than their competitors, has emerged as a pre-eminent sustainable source of competitive advantage (Jashapara, 2003: 35). The learning organization concept is seen as a resource-oriented approach that is based on the ability of the organization to turn Standard resources that are available to all into competences that are unique and cannot be easily copied by competitors (Karash, 2002). To be a learning organization, this signifies an approach to organizational change and continuous improvement that demonstrates the capacity for change.

Total Quality Management (TQM) principles and practices are believed to underpin the evolution of the learning organization, and is an excellent first step toward a learning organization. Organizations need only to recognize that continuous improvement activities create the required environment for organizational learning to occur (Terziovski, et al., 2000: 27). The concept of a learning organization has elements of prescription, in that it follows the Western conceptualization of adopting Japanese practices that incorporate the philosophy of total quality management (Wyer, et al., 2000: 247).

As said above, the purpose of this study is to *analyze the relationship between the Learning Organization Characteristics and their effects on adopting Total Quality Management criteria.*

(1-2): Study Problem and Questions

Organizations succeed in today's marketplace because they change, and organizational learning is about learning that results in change and improvement. Inherent in its philosophy is the importance of generative learning, as well as adaptive learning. *Adaptive learning* is learning for the purpose of adapting to what is known, what is now. Adaptive learning is the hallmark of the early stages of the Total Quality Management movement, when organizations focused on learning in order to adapt their products, services, and work processes to the changing times and evolving needs of customers. *Generative learning*, on the other hand, is purposeful learning and changing in order to anticipate what might happen, what the customer could want. It means going beyond just fixing problems to seeking continuously for ever more creative solutions (O'Brien & Bennett, 1994: 96-97).

Based on above, the Study Problem may be demonstrated via the questions below:

Question One: What is the level of importance of learning organization characteristics in Jordanian Commercial Banks?

Question Two: What is the level of importance of Total Quality Management criteria in Jordanian Commercial Banks?

Question Three: Is there a relationship within the learning organization characteristics (*Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking*)?

Question Four: Is there an impact of learning organization characteristics (*Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking*) on adopting Total Quality Management criteria?

(1-3): Study Hypothesis

Based on the study problem and the literature review, the following research Hypotheses were examined:

H01: There is no significant relationship within the Learning Organization characteristics (*Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking*) at level ($\alpha \leq 0.05$).

H02: There is no significant impact of learning organization characteristics (*Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking*) on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-1: There is no significant impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-2: There is no significant impact of Personal Mastery on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-3: There is no significant impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-4: There is no significant impact of Shared Vision on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-5: There is no significant impact to Systems Thinking of adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

(1-4): Significance of the Study

The importance of the current study is as follows:

1. The importance of the variables being investigated represented in learning organization characteristics and total quality management criteria.

2. Clarifying the impact extended from the Learning Organization characteristics on adopting Total Quality Management criteria in Jordanian Commercial Banks.

3. The importance level of the characteristics interrelationship and their impact, within the study variables that clarify the situation before the decision makers in Jordanian Commercial Banks.

4. The results of the study can provide a better context for the Jordanian Commercial Banks and more information for the decision makers about the benefits of the learning organization approach.

(1-5): Objectives of the Study

The main objective of this study is to analyze the Relationship within the Learning Organization Characteristics and their effects on adopting Total Quality Management criteria in Jordanian Commercial Banks, through achieving the following:

- 5. Preparing theoretical framework, through understanding the learning organization and total quality management topics.**
- 6. Identifying the level of importance for the study variables in Jordanian Commercial Banks.**
- 7. Assigning the relationship within the learning organization characteristics.**

8. Exploring the impact of learning organization characteristics on adopting Total Quality Management criteria.

(1-6): Study Limitations

Human Limitations: The employees of Commercial Banks in Jordan who occupy positions such as (General Manager, Assistant General Manager and Administrative & HR Managers).

Place Limitations: Jordanian Commercial Banks.

Time Limitations: The time covered by the study is from 15th October to 15th December, 2009.

Scientific Limitations: The researcher aims to depend on the variables of the learning organization characteristics that were suggested by **Senge (1999)** (*Mental Models; Personal Mastery; Team Learning; Shared Vision and Systems Thinking*). However, in the Total Quality Management Criteria the researcher aims to depend on **Huey We (2004)** (*Leadership; Strategic Planning; Stakeholder and Market Focus; Staff Focus and Process Management*).

(1-7): Study Difficulties

1. Implementing the study on the Banking Sector, especially The Commercial Banks in Jordan.

2. This Study is limited to the General Managers, General Manager Assistants and HR & Administrative Managers in Jordanian Commercial Banks.

3. Previous studies related to the learning organization characteristics and the total quality management Criteria are few.

(1-8): Study Model

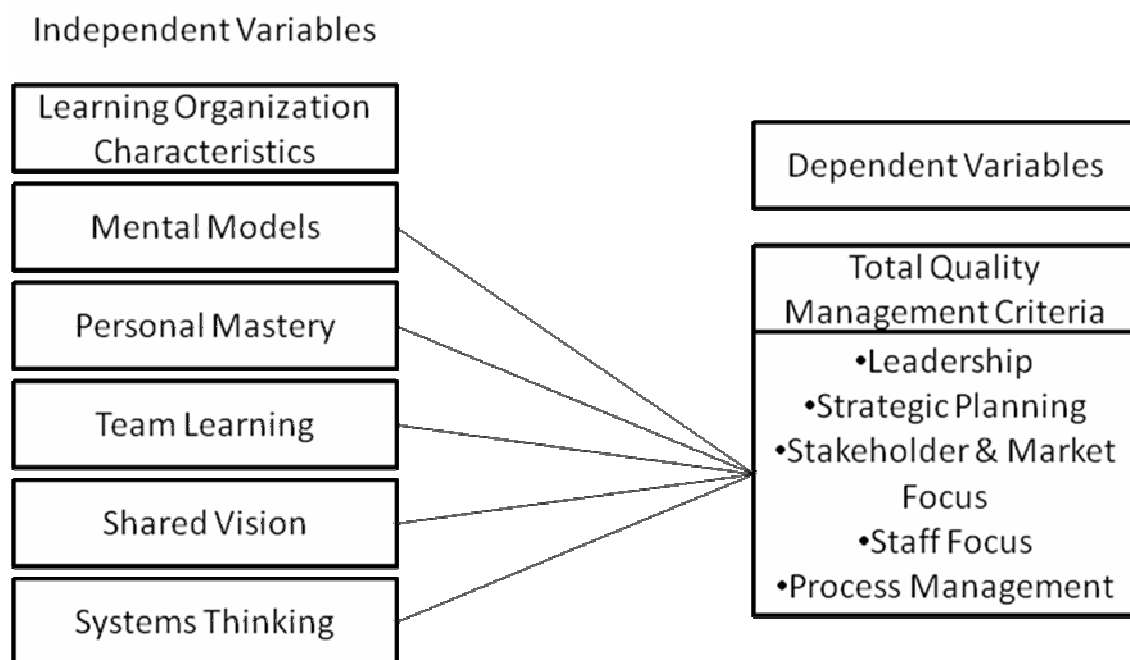


Figure (1-1)
Study Model

(1-9): Terminologies of the Study

Learning Organization: A place where people continually expand their capacity of creating results, where patterns of thinking are broadened and nurtured, where collective aspiration is free and where people are continually learning to learn (Senge, 1990:1)

Mental Models: Deploy ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action (Senge, 1990: 174).

Personal Mastery: Discipline of continually Clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively (Senge, 1990:139).

Team learning: Work is designed to use teams to access different modes of thinking; collaboration is valued by the culture and rewarded, teams are expected to learn by working together (Watkins & Marsick, 1996).

Shared Vision: involves the skills of unearthing shared "pictures of the future" that foster genuine commitment and enrollment rather than compliance (Senge, 1990:139).

Systems Thinking: A conceptual framework, a body of knowledge and tools to make the full patterns clearer, and to help us see how to change them effectively (Senge, 1990:185)

Total Quality Management Criteria: Few over arching requirements that must be present for an organization to be able to attain its vision, and to be guided towards its vision. The success depends on customer program, stakeholders, people and process (Wali, et..al, 2003: 4).

CHAPTER TWO

THEORETICAL FRAMEWORK AND PREVIOUS STUDIES

(2-1): Introduction

(2-2): The Theory of Learning Organization

(2-3): Conceptual Framework of Total Quality Management

(2-4): The Relationship between LO & TQM

(2-5): Previous Studies

(2-1): Introduction

The learning organization concept gained broad recognition when Senge published his bestselling *The Fifth Discipline* in 1990. In it he writes that a learning organization values, and derives competitive advantage from, continuing learning, both individual and collective. The five disciplines are systems thinking, personal mastery, mental models, shared vision, and team learning (Senge, 1990). Senge proposes that people put aside their old ways of thinking (mental models), learn to be open with others (personal mastery), understand how their company really works (systems thinking), form a plan everyone can agree on (shared vision), and then work together to achieve that vision (team learning).

(2-2): The Theory of Learning Organization

Buta and Karkhanis (1996) stated if an organization is to adopt the learning disciplines then implementing quality assurance is only the first hurdle of the quality conundrum. It does not improve organizational competitiveness and overall performance, if organizations merely implement quality assurance (*Terziovski, 1997*).

Also, learning is recently increasingly appreciated as a key to competitiveness and learning organization has become a popular concept in management and organization development not only in the industry but also in non-profit organizations,

The concept of the learning organization can be traced to Simon's seminal work (1957) (*Love, et..al., 2000*). There are different definitions of the concept reflecting varying emphasis for learning organization.

Senge (1990: 14) defined a learning organization as “where people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together”. Then, he stated, “learning in organization means the continuous testing of experience, and the transformation of that experience into knowledge, accessible to the whole organization, and relevant to its core purpose” (***Senge, 1994:49***).

Pedler, et..al, (1991: 5) defined a learning organization as “one which facilitates the learning of all its members and continuously transforms itself.”.

Mills and Friesen (1992: 145) recognized the learning organization as “one able to sustain consistent internal innovation or learning; with immediate goals of improving quality, enhancing customer or supplier relationships or more effectively executing business strategy, and the ultimate objective of sustaining profitability”.

Garvin (1993: 80) sees learning organization as “an organization skilled at creating, acquiring and transferring, knowledge and at modifying its behavior to reflect new knowledge and insights.

Thurbin's (1994: 15) definition for a learning organization was “one which improves its knowledge and understanding of itself and its environment over time by facilitating and making use of learning of its individual members”.

Calvert, et.. al. (1994: 40) described the learning organization by focusing on group sessions for academics and practitioners designed and organized: “an organization that excels at advanced systematic collective learning”.

Field and Ford (1995: 15) stated the learning organization is “an organization with a well developed capacity for double-loop learning; where there is ongoing attention to

learning how to learn; where the key aspects of organizational functioning support learning”.

Nevis, et..al. (1995: 73) related the learning organization to “the capacity or processes within an organization to maintain or improve performance based on experience”.

Watkins and Golembiewski (1995: 86) noted that the learning organization “involves creating systems which put in place long term capacities to capture knowledge, to support creation, and empower continuous transformation”.

Moilanen (1999: 11) stated that “a learning organization is a consciously managed organization with ‘learning’ as a vital component in its values, visions and goals, as well as in its everyday operations and their assessment. The learning organization eliminates structures and takes care of assessing its learning and development. It invests in leadership to assist individuals in finding the purpose, in eliminating personal obstacles and in facilitating structures for personal learning and getting feedback and benefits from learning outcomes”.

When discussing the learning organization, it is necessary to distinguish between learning organization and organization learning.

Sun and Scott (2003: 202) stated that “organizational learning became the descriptive stream and dealt mostly with the learning processes in the organization, in contrast, learning organization became the prescriptive stream with a strong practical focus.”. Although these two terms are closely related, they are not one and the same (***Jones and Hendry, 1992; Calvert et al., 1994***).

Senge proposed the five “learning disciplines” as the core of learning organization work for lifelong programs of study and practice. These five disciplines are:

1. ***Personal Mastery*** – “learning to expand personal capacity to create the results we most desire, and creating an organizational environment, which encourages all its members to develop themselves toward the goals and purpose they choose”. In this discipline, it is necessary to take a series of practices and principles as the way to begin developing a sense of personal mastery. People need to build personal vision, holding creative tension, understanding the structural conflict, the power of your powerlessness, commitment to the truth, and using the subconscious as possible (Senge, 1994: 6-7).

2. ***Mental Models*** – “reflecting upon, continually clarifying, and improving our internal pictures of the world, and seeing how they shape our actions and decisions” (Senge, 1994: 6-7). The skills of this discipline include “planning as learning” and “internal boards”, reflection and inquiry skills advocated by Argyris. The practice of recognizing leaps of abstraction, excising left-hand column, balancing inquiry and advocacy, recognizing the gap between “espoused theories” (what we say) and “theories-in-use” (the theories that lay behind our actions) are the base for practicing reflection and inquiry skills.

3. ***Shared Vision*** – building a sense of commitment in a group, by developing shared images of the future we seek to create, and the principles and guiding practices by which we hope to get there (Senge, 1994: 6-7). The skills of this discipline included encouraging members to build personal vision, create shared visions from personal visions, and spreading visions: not just enrollment, or compliance, it should have commitment from members.

Senge adopted Kiefer's words: “Enrollment is the process, of becoming part of something by choice”. “Committed describes a state of being not only enrolled but feeling fully responsible for making the vision happen” (Senge, 1990: 218). Almost 90 percent of today's organizations are not commitment, but compliance. If communities of servant

leaders, not hero leader, can build learning organizations, can convince the members to have commitment to the organization (Kofman and Senge, 1993: 17).

4. **Team Learning** – transforming conversational and collective thinking skills, so that groups of people can reliably develop intelligence and ability greater than the sum of individual members' talents (Senge, 1994: 6-7).

Team learning is a collective discipline and involves mastering the practices of dialogue and discussion. “In a discussion, different views are presented and defended, and this may provide a useful analysis of the whole situation. In dialogue, different views are presented as a means toward discovering a new view” (p.247). Team learning also “involves learning how to deal creatively with the powerful forces opposing productive dialogue and discussion in working teams” (Senge, 1994: 237-247).

An organization should appropriately deal with conflict and defensive routines. According to Senge's experience, “one of the most reliable indicators of a team that is continually learning is the visible conflict of ideas. In great teams conflict becomes productive” (Senge, 1994: 249). Senge (1990: 237-250) stated that Argyris calls “defensive routines” as “habitual ways of interacting that protect us and others from threat or embarrassment, but which also prevent us from learning”. “Defensive reasoning ... protects us from learning about the validity of our reasoning”.

5. **Systems Thinking** – “A way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems. This discipline helps us see how to change systems more effectively and to act more in tune with the larger processes of the natural and economic world” (Senge, 1994: 6-7).

Structure influences behavior, such as the “beer game” (Senge, 1990: 28-53), regarded as the first principle of systems thinking. “Structures produce behavior, and changing underlying structures can produce different patterns of behavior...Moreover,

since structure in human systems includes the ‘operating policies’ of the decision makers in the system, redesigning our own decision making redesigns the system structure”.

The laws of the fifth discipline are important to know. They include: today’s problems come from yesterday’s solutions; the harder you push, the harder the system pushes back; behaviors grow better before it grows worse; the easy way out usually leads back in; the cure can be worse than the disease; faster is slower; cause and effect are not closely related in time and space; small changes can produce big results – but the areas of highest leverage are often the least obvious; you can have your cake and eat it too – but not at once; dividing an elephant in half does not produce two small elephants; and there is no blame – systems thinking shows you and the cause of your problems are part of a single system. The cure lies in your relationship with your “enemy” (*Senge, 1990: 67*).

Senge (1990) attempted to apply the five disciplines to be sustainable tools for any organization. Some important researches on the application of Five Disciplines are as follows:

In “The Leader’s New Work: Building Learning Organization”, *Senge* (1990: 9-10) stated that leaders need to have vision, but there will be creative tension between current reality and vision. “Leading through creative tension is different from solving problems...with problem solving; the motivation for change is extrinsic. With creative tension, the motivation is intrinsic. This distinction mirrors the distinction between adaptive and generative learning”. He proposed the leader’s new roles as designer, teacher, and steward. The new roles should connect with new skills and tools for leadership in this new sort of management development – learning organization.

As most of American companies failed to grasp the deeper messages of the quality movement, *Senge* (1992; 1999) stated that it has always been about learning. When he

reviewed the roots of the quality movement, Senge cited Dr. Deming's words: "The prevailing system of management has destroyed our people". "People are born with intrinsic motivation, self-esteem, dignity, curiosity to learn, joy in learning" (Senge, 1994: 61). The intrinsic motivation is more important than extrinsic motivation. It is like a house built on sand if the organization's commitment to quality is not based on intrinsic motivation.

Senge (1992; 1999) identified the PDCA cycle coming from Dewey's theory of learning.

(Senge, 1994: 63) posited that all learning involves a cycle between four basic stages:

1. Discover: the discovery of new insights.
2. Invent: creating new options for action.
3. Produce: producing new actions.
4. Observe: seeing the consequences of those actions that lead to new discoveries, continuing the cycle.

Isaacson and Bamburg (1992) applied the five disciplines, and developed the notion of a Learning Organization, to prove schools were learning organizations. *Kline and Saunders (1998)* also adopted the five disciplines, as the direction of their research in "Ten Steps to a Learning Organization" to consolidate and increase the gains in the corporate training field. The ten steps assessed learning culture, promoted the positive, made the workplace safe for thinking, reward risk-taking, help people become resources for each other, put learning power to work, map out the vision, bring the vision to life, connect the systems, and get the show on the road.

Hodgkinson (2000: 166) researched the perceptions of barriers to becoming a "learning organization" by using a group of middle managers employed in a large

international company who were also postgraduate management students. He found communication was identified as the important barrier, particularly the communication of organizational policy statements. The other concern was the communication between functions. Employees are not fire fighters so that long term and short term should have different strategic focus. “A blame culture with fear of failure” should be tailored and avoided to have the positive impact on the organization.

Senge (1994: 45-46) stated there were two interrelated issues, which occur, in the learning processes: patience, and quantification. For patience, O’Brien proposed a simple guiding principle “Time periods for measurement must be congruent with the gestation period of the learning” For the second, quantification, a simple guiding principle was “Measure quantitatively that which should be quantified; measure qualitatively that which should not be quantified”.

Garvin (1993: 89) found there are three critical issues left unresolved in most discussions of learning organization, called “**three Ms**”: meaning, management, and measurement. Garvin emphasized that “if you can’t measure it, you can’t manage it”. Organizational learning can usually be traced through three overlapping stages: cognitive, behavioral, and performance improvement. Surveys, questionnaires, and interviews are alternative ways for this purpose.

Kline and Saunders (1998) listed a 36-item Learning Organization Assessment. Issues addressed include: “fear/risk-taking, communication/feedback, flexibility/structure, stress/peer support, learning, continuous improvement, management orientation and involvement, and operating norms” (*Bill and Devilbiss, 2000*).

Campbell and Cairns (1994) used the survey instrument of behaviorally anchored rating scales (BARS), which was initially conducted by *Smith and Kendall (1963)* and

refined by **Landy and Farr (1983)**, to examine behaviors displayed in an organization by comparing them with a range of predetermined behaviors. The outcomes were displayed on a Likert-type scoring scale to provide a measurement of the gap between actual and desired performance.

Campbell and Cairns (1994: 14) believed that a learning organization had certain behaviors associated with at least eight categories of items called attributes. They translated the attributes into the BARS in order to measure the behavior associated with each attribute. The attributes included: “communication, learning and innovation, strategic thinking and vision, information, decision-making, managing change, measurement, as well as reward and recognition”.

Pedler, et..al., (1988) developed 11 characteristics that should be incorporated within a learning company. These are: a learning approach to strategy, participative policy-making, information, formative accounting and control, internal exchange, reward flexibility, enabling structures, boundary workers as environment sciences, inter-company learning, learning climate, and self-development opportunities for all.

These 11 characteristics provide the basis of the diagnostic instrument and serve as a diagnostic and developmental purpose. **Leitch, et..al., (1996)** used these 11 characteristics and a case study approach to consider the training, development, and learning potential of one company by using The Learning Company Project questionnaire.

After the study of Motorola, Mutual Investment Corporation, **Electricite de France, and Fiat, Nevis, et. al., (1995: 74)** concluded that all these companies had systems that supported learning. They believed the learning orientation or the learning style and facilitating factors formed an organizational learning system. They assumed that the learning process consisted of identifiable stages and proposed a three-stage model:

1. Knowledge acquisition – the development or creation of skills, insights, relationships.

2. Knowledge sharing – the dissemination of what has been learned.

3. Knowledge utilization – the integration of learning so it is broadly available and can be generalized to new situations.

Rheem (1995) researched a similar effort to classify organizations according to the learning style. He classified four types of organizational learning styles: competence acquisition, experimentation, continuous improvement, and boundary scanning.

Both **Nevis, et.. al., (1995: 74)** and **Rheem (1995)** also observed that a company must use a learning style that matches its culture in order to maximize competitiveness.

Dimensions of the Learning Organization Questionnaire (**Watkins and Marsick, 1998: 11**). The Learning Organization Diamond was developed and composed of two different levels (the individual and the organization level) and five different elements (driving forces, finding purpose, questioning, empowering, and evaluating). This measuring instrument was “not just a process of formulating and operations, but also involves understanding of the core of the concept to be measured”. He concluded that the tool developed and other tools presented in this article showed different purposes of the instruments. Further instruments can be tailored and developed for their specific purposes.

The researcher took both qualitative and quantitative themes of the learning organization as popularly used in organizational research.

Most of research is qualitative. As **Garvin (1993: 89)** noted, “If you cannot measure it, you cannot manage it”.

(2-3): Conceptual framework of Total Quality Management

Total Quality Management (TQM) was originated in the United States. Edwards Deming, Juran, and Crosby introduced it to Japanese industry and Japan enhanced and expanded the philosophy. The evolutionary development of quality management was extended from inspection, to statistical quality control, to quality assurance, to total quality control, and finally to total or strategic quality management (Tummala and Tang, 1994).

TQM is the concept and philosophy of continuous improvement, i.e. “TQM is a management philosophy which puts systems and processes in place to meet and exceed the expectations of customers. It is a relentless quest for continuous improvement through documentation and the use of tools in a problem-solving atmosphere that features team actions and good leadership practices” (Spanbauer, 1995: 521).

***Tobin (1990: 10)* defined TQM as “the totally integrated effort for gaining competitive advantage by continuously improving every facet of organizational culture”.**

***Feigenbaum (1991: 6)* defined TQM as the “total quality control’s organization-wide impact”. *Wilkinson and Witcher (1991: 47)* provided a comprehensive definition for TQM:**

- **Total: every person in the firm is involved (including customers and suppliers).**
- **Quality: customer requirements are met exactly.**
- **Management: senior executives are fully committed.**

The quality gurus in the twentieth century are Deming, Juran, Crosby, Feigenbaum, and Ishikawa. Their philosophies are described as follows:

1. *W. Edwards Deming*

Deming's philosophy of quality management emphasized that top management must orient themselves to innovate and commit resources constantly to support innovation and continuous improvement (Deming, 1986). His seven deadly diseases, the fourteen point's management method, and PDCA (Plan-Do-Check-Action) cycle are still useful for different industries. These are described as follows:

The Seven Deadly Diseases are (Walton, 1988: 36):

- (1) Lack of constancy of purpose.
- (2) Emphasis on short-term profits.
- (3) Evaluation by performance, merit rating, or annual review or performance.
- (4) Mobility of management.
- (5) Running a company on visible figures alone.
- (6) Excessive medical costs.
- (7) Excessive costs of warranty, fueled by lawyers that work on contingency fee

The Fourteen Points Management Method includes (Walton, 1988: 34-36):

- (1) Create constancy of purpose for improvement of product and service.
- (2) Adopt the new philosophy.
- (3) Cease dependence on mass inspection.
- (4) End the practice of awarding business on price tag alone.
- (5) Improve constantly and forever the system of production and service.
- (6) Institute training.
- (7) Institute leadership.

- (8) Drive out fear.**
- (9) Break down barriers between staff areas.**
- (10) Eliminate slogans, exhortations, and targets for the workforce.**
- (11) Eliminate numerical quotas.**
- (12) Remove barriers to pride of workmanship.**
- (13) Institute a vigorous program of education and retraining.**
- (14) Take action to accomplish the transformation.**

The PDCA cycle means the never-ending cycle of experimentation that structures all quality improvement efforts (Senge, 1992) and provides focus on defect correction as well as defect prevention (Stamatis, 1996).

2. *J.M. Juran*

With the definition of quality as fitness for use, Juran developed a comprehensive approach to quality that spanned “a product’s entire life” – from design through vendor relations, process development, manufacturing control, inspection and test, distribution, customer relations, and field service. Each area was carefully dissected, and approaches were proposed to specify and quantify its impact on the various elements of fitness for use (March, 1999: 143). Second to Deming in impact on the quality movement in Japan, Juran developed a useful framework called “quality trilogy” - quality planning, quality control, and quality improvement, which referred to as “a universal thought process – a universal way of thinking about quality, which fits all functions, all levels, all product lines” (Juran, 1986: 20).

In attracting top management attention, Juran introduced the concept of the costs of poor quality (COPQ) and advocated that quality improvement should be aimed at reducing continuously the COPQ that would result from the product deficiencies. The third

component – quality control, was recommended as a means of accomplishing this goal (Tummala and Tang, 1994).

3. *Philip B. Crosby*

Crosby (1979: 15) defined quality as “conformance to requirements” and stated that effective quality management, to be practical and achievable, must start at the top.

Crosby also launched a cultural revolution in emphasizing defect prevention over defection, recognition of quality as a genuine first among equals, doing things right the first time, and organization-wide involvement to develop quality improvement strategies.

Zero defects should be the management Standard and the costs of quality and quality management maturity grid can be a means to improve quality. If the quality is improved, total costs would eventually fall, which Crosby claimed is “quality is free” (Crosby, 1979: 112).

Crosby proposed fourteen steps to provide management with a blueprint and an easy to-understand approach for management to launch the journey toward world-class quality (Stamatis, 1996). The fourteen steps are: (1) Management commitment (2) Quality improvement team (3) Quality measurement (4) Cost of quality evaluation (5) Quality awareness (6) Corrective action (7) Zero defects planning (8) Supervisor training (9) Zero defects day (10) Goal setting (11) Error cause removal (12) Recognition (13) Quality councils (14) Do it all over again.

4. *Armand V. Feigenbaum*

Introducing “total quality control” (TQC) for the first time in the 1950s, Feigenbaum defined TQC as an “effective system for integrating the quality deployment, quality maintenance, and quality improvement efforts of the various groups in an organization so as to enable marketing, engineering, production and service at the most

economical levels which allow for full customer satisfaction". Thus, TQC required effective ways to integrate the efforts of large numbers of people, with large numbers of machines, and huge quantities of information (Feigenbaum, 1991: 94). Fearing that quality which is everybody's job in a business can become nobody's job, Feigenbaum suggested that TQC should be conducted essentially as QC specialists.

5. *Kaoru Ishikawa*

Ishikawa further intensified the concept of TQC in advancing the Japanese approach, which was different from Feigenbaum's approach, QC specialists. He advocated the company-wide quality control (CWQC) emphasizing that everyone in every division in the company must study, practice, and participate in quality control (Ishikawa, 1985).

Costin (1999) reviewed the literature and stated there was no perfect consensus in terms of what all the key concepts of TQM. He adopted the *Marchese (1991:7-8)* hypothesis, where the themes pervade in literature, as follows:

1. Excellence is ascribed to customer-driven organizations that systematically integrate customer feedback into their strategic planning and delivery of products and services.
2. Customer-driven organizations have a strong focus on quality, with quality being defined as both the measurable dimensions of products and services and the perceptions of internal and external customers.
3. Continuous improvement is the result of a focus on quality.
4. Improvement means making processes work better.
5. There is a strong need to extend the existing mind-set and shift to paradigms that see organizational and individual success as a result of collaboration rather than cutthroat competition.
6. Decision should be data driven. Previous experience needs to be systematically documented and analyzed to achieve continuous improvement.

7. Teamwork is the practical application of “collaboration.” In order to be effective, teams need to be trained in creative and analytical problem-solving techniques.

8. People should be empowered, i.e., have real input and decision-making power in job design and organizational policies that affect them.

9. Training and recognition are essential (according to Ishikawa TQM begins and ends with education).

10. A vision is the key to give any organization a unified direction and avoid wasteful duplication of efforts and avoid wasteful duplication of efforts and infighting.

11. Organizational change is only possible through effective leadership by example. Empty promises and speeches only make existing problems worse.

***Tummala and Tang (1994)* identified the core concepts from the significant contributing factors promoted by the quality gurus as fundamental in developing the strategic and operational strategies to continuously improve the quality of products or services. The core concepts of strategic quality management are:**

1. Customer focus.

2. Leadership.

3. Continuous improvement.

4. Strategic quality planning.

5. Design quality, speed and prevention.

6. People participation and partnership.

7. Fact-based management.

(2-4): The Relationship between LO & TQM

This section will discuss the relationship within the core categories of TQM and the relationship among Senge's five disciplines. After that, the relationship between Total Quality Management and Learning Organization will be reviewed.

Since the categories, examination items, and the framework of the MBNQA criteria present the underlying relationships between the various quality management constructs and between quality management and organization performance, researchers (**Curkovic et al., 2000; Pannireselvam and Ferguson, 2001; Wilson and Collier, 2000**) applied statistical methods to verify the causal relationship and the results also were supported. In addition, most of the categories of MBNQA were latent variables; confirmatory factor analysis and structural equation modeling were applied.

Regarding the Five Disciplines, Senge identified systems thinking as vital to integrate the other four disciplines, fusing them into a coherent body of theory and practice. Senge stated there is a strong relationship among the five disciplines and within the Learning Organization and organizational performance.

Garvin (1993) stated that if TQM is practiced as philosophy (i.e. continuous improvement) as well as a set of techniques (i.e. Plan, Do, Check, Act or PDCA cycle), then it could be a vehicle for organizational learning. **Watkins and Golembiewski (1995)** stated organizational development and TQM have been building learning organizations all along. **Senge (1992)** believed that the TQM philosophy had been founded on the learning concept.

Terziovski, et.. al. (2000) based on the Malcolm Baldrige National Quality Award (MBNQA) criteria and Senge's five disciplines used the multiple cross-case content

analyses to evaluate the mutual dependence between TQM and the learning organization. TQM principles and concepts, which underpin the evolution of the learning organization were found and supported by the qualitative data that were gathered from five Australian companies.

Sohal and Morrison (1995) applied *Garvin's* suggestion (1993) for a learning organization and studied three Australian companies. They found TQM tended to create the environment necessary for organizational learning to occur. Conversely, the learning organization created competitive advantage by adapting to changing environment and continuous improvement.

Dervitsiotis (1998) examined the relationship of re-engineering, TQM and the learning organization and concluded the last two are considered most likely to yield enduring long-term results. The similarities and differences of TQM and the learning organization were recognized; however, it is more desirable to use both of them currently. The impacts of learning organization discipline on EQA elements are also showing strong influence. In addition, Dervitsiotis stated they must be deployed in different ways by top, middle and lower levels in the organization. Thus, management can utilize the collective intelligence of the organization better to develop through creative innovations.

Presutti, et. al. (1995) applied the Point 9 of Deming's 14-point management method, breaking down barriers between staff areas, as the foundation for the pedagogical approach. They found that the principles of total quality management and cooperative learning might change the nature of organizations.

(2-5): Previous Studies

The researcher divided previous studies into three sections, as follows:

(2-5-1): Previous Studies in Total Quality Management

- **(Najeh & Kara-Zaitri, 2007)** titled “*A Comparative Study of Critical Quality Factors in Malaysia, Palestine, Saudi Arabia, Kuwait and Libya*” compares and contrasts quality visions and practice in five countries: Malaysia, Palestine, Saudi Arabia, Kuwait and Libya. On the basis of such comparison, the paper proposes a model of international benchmarking for successful implementation of TQM. The paper argues that while the model derives from the cultural settings, corporate conditions, visions and experiences of developing countries (Africa, Middle East and Asia), it potentially carries the making of a generic framework for successful implementation of TQM in other developing countries.

- **(Hafeez, et..al, , 2006)** titled “*A Framework for TQM to Achieve Business Excellence*” provides an analysis of the essential characteristics of the TQM philosophy by comparing the work of ten notable authors in the field. A framework is produced which clusters the identified TQM enablers under the well-known operations management dimensions of technology, organization and people. These enablers are linked with business performance via balance scorecard type financial and non-financial measures. In order to capture a snapshot of European Company’s efforts to implement the TQM, a questionnaire survey is designed and implemented. Results of the survey are presented showing the main differentiating factors between the sample companies, and a way of assessing the difference between the theoretical underpinning and the practitioners’

undertakings. Survey results indicate that organizations are experiencing much difficulty in translating total quality management theory into practice. Only a few organizations have successfully adopted a holistic approach to total quality management philosophy, and most of these put relatively High emphasis on technology elements compared with soft issues of TQM. However, where companies can realize the financial outputs, non-financial benefits such as workflow management, skills development and team learning are not realized. In addition, overall, non-financial measures have secured low weightings compared with the financial measures. We believe that the framework presented in this paper can help an organization to concentrate its TQM implementation efforts in terms of technology, organizational and people management dimensions.

- In (Baidoun, 2004) titled “*The implementation of TQM philosophy in Palestinian organization: a proposed non-prescriptive generic framework*” the main focus of the study was to identify the critical quality factors for effective TQM implementation and to understand how these critical quality factors are implemented by the Palestinian organizations. It is believed that the successful implementation of TQM in the Palestinian context should be a gradual approach with progression and selection of appropriate major top management actions. Therefore, a logical and simple framework based on the empirical evidence derived from the analysis of three levels of investigations is provided including the major top management actions, the organizational activities and the guidelines that need to be taken when addressing the foundation elements and the core components (critical quality factors) for successful implementation.

- In (Sadikoglu, 2004) “*Total Quality Management: Context and Performance*”, the objective was to figure out relationships among TQM implementation, its acceptance, and

operational performance of companies considering contextual factors of company size and existence of union, and industry type. Questionnaires were mailed to 437 companies in different industries located in the Midwest, U.S. The study found most of the companies implemented TQM with a High degree of its acceptance. Also, company size, existence of union, and industry type did not significantly affect acceptance of TQM and TQM performance. Quality-oriented companies should improve their internal efficiency as well in order to improve their productivity, profit, and competitiveness.

- (Mohanty & Lakhe, 1998) “*Factors affecting TQM implementation: an empirical study in Indian industry*” attempts to identify the critical factors for TQM implementation through survey-based research carried out in Indian industry. Meanings and operational measures of such critical factors are articulated and developed by involving the industry managers as the appropriate subjects. The measures are subject to internal consistency and reliability tests. A factor model is evolved which may facilitate the articulation of global perspectives, and understand business imperatives and undertake strategic initiatives to implement TQM programs across different industry sectors. Some pertinent remarks relating to Indian industry are mentioned. In doing so, this paper establishes a framework for subsequent research and for evaluation of TQM programs by industry practitioners.

- (Pereira & Aspinwall, 1997) “*Total quality management versus business process re-engineering*” describes the main principles of the BPR methodology, and presents the main reasons for failure in the implementation, as focused on by various authors. A summary of the current debates on TQM versus BPR follows. The main conclusions about the differences between the two methodologies are discussed and a proposal for

integrating them is offered. It is concluded that the major features for achieving success within an organization are the definition of its mission and goals, an adequate analysis of current processes and an appropriate choice of processes for improvement. This will determine whether the change has to be radical or not.

(2-5-2): Previous Studies in Learning Organization

- **(Sudharatna & Li, 2008)** “*Learning Organization Characteristics Contributed to its Readiness-to-Change: A Study of the Thai Mobile Phone Service Industry*” aims to verify the relationship between Learning Organizations characteristics and an organization’s readiness-to-change. Learning Organizations, based on a review of the literature, seem to have the competitive advantage of High readiness-to-change in today is economic business environment. The mobile service providers in Thailand are selected for this study. The results have shown a substantial relationship between readiness-to-change and the Learning Organizations characteristics of cultural values, leadership commitment and empowerment, communication, knowledge transfer, employee characteristics, and performance upgrading. This study confirms that Learning Organizations characteristics are correlated to an organization’s readiness-to-change, suggesting that it is essential for organizations to develop into Learning Organizations in order to survive and/or prosper in a competitive and ever changing in business environment.

- **(Liao, 2006)** “*A learning organization perspective on knowledge-sharing behavior and firm innovation*” builds a nested model to test the relationship between learning organization, knowledge-sharing behavior, and firm innovation. Data gathered from 254 employees were used to examine the relationship of the learning organization to

employees' knowledge-sharing behavior and firm innovation. The results indicate that open-mindedness, shared vision and trust have positive effects on both knowledge-sharing behavior and firm innovation. While commitment to learning does not show significant relationship on knowledge-sharing behavior and firm innovation. Communication has significance on firm innovation but not significance on knowledge-sharing behavior.

- In (Rebello & Gomes, 2006) "*Organizational learning and the learning organization: Reviewing evolution for prospecting the future*" purpose of this article is to analyze the evolution of the concepts of organizational learning and the learning organization and propose guidelines for the future. The evolution of organizational learning and the learning organization is analyzed in the light of the three-stage model of the evolution of concepts developed by Reichers and Schneider in 1990. Based on the aforesaid model, the authors positioned these topics at the beginning of the second stage of evolution, a period characterized by evaluation and the attempt to add to the comprehension of concepts through empirical research and conceptual clarification. Faced with this finding, the authors argue that the development and consolidation of concepts is mainly a question of researcher' responsibility and suggest some key areas to guarantee their progress and their general acceptance in the future.

- In (Dymock & McCarthy, 2006) "*Towards a learning organization? Employee perceptions*" the purpose is to explore employee perceptions of the development of a learning culture in a medium-sized manufacturing company that was aspiring to become a learning organization. The research comprised an extended interview with the company's Organizational Development Manager, a validated questionnaire on the

learning organization with a cross-section of 80 staff, and semi-structured interviews with a stratified sample of 20 employees. The company was using learning to develop its competitive edge, and employees were at various stages of understanding and acceptance of the need for learning and competence development on the job to sustain and develop the company. A tension was detected between the company's objectives and the aspirations of some employees, but the majority appeared to accept the overt learning policy as good for them and the company.

- In (Abu Khadra & Rawabdeh, 2006) "*Assessment of development of the learning organization concept in Jordanian industrial companies*" the purpose is to examine the impact on organizational performance of the application of management and human resource practices, and to attempt to outline key elements and assess development of the learning organization (LO) concept in Jordan. The tool described in this article assesses relationships between LO practices and financial and operational performance measures. The empirical research aims at deconstructing the LO formation through the development and validation of a conceptual model. A total of 41 companies belonging to large industrial sectors in Jordan participated in a survey by responding to a research questionnaire. The outcomes of the study indicate that the LO concept can be explored in Jordanian industry using eight constructs. These constructs were found to be strongly correlated. In general,, this study identifies basic steps in the process of transformation into a learning organization in Jordan.

- In (Aramburu, et..al, 2006) "*Organizational learning, change process, and evolution of management systems: Empirical evidence from the Basque Region*" the purpose of this research is to analyze the relationship between the organizational learning capacity of manufacturing companies in the Spanish Basque Region and their

management systems. To this end, an ad hoc questionnaire was devised and addressed to the Chief Executive Officers of a representative sample of 200 companies from all manufacturing sectors of the Basque Country. The results obtained show that the characteristics of the management system of a company (the strategy formulation process and organizational design) do not condition the learning level that can be attained as a result of an experience of concrete change. However, it is true that companies which have experienced changes in which a High level of learning has been achieved have adapted their management systems more according to what theorists deem appropriate to help future learning.

(2-5-2): Previous Studies Related to relationship between Learning Organization and Total Quality Management

- In (Chang & Lung Sun, 2007) "*Exploring the Correspondence between Total Quality Management and Peter Senge's Disciplines of a Learning Organization: A Taiwan Perspective*" the most important part of Total Quality Management (TQM) is pursuing continuous improvement in all aspects of organization, whereas Learning Organization (LO) denotes learning principles that eventually lead to organization learning and growth. Because these principles seek similar goals, to investigate the association of these philosophies is of great value to management the primary purpose of this paper is to explore the correspondence between TQM and LO. A group of evaluators consisting of academic scholars, business consultants as well as industry practitioners, judged the relative strength of the relationship between TQM constructs and Senge's five disciplines of learning organization. By applying correspondence analysis and cluster analysis, the result exhibits that close correspondence emerges between TQM and LO. Moreover, TQM

constructs and LO disciplines are located on a two-dimensional coordination of a management map, in which dimensions of the measurability and the infusibility are inferred and managerial implications from these dimensions are articulated. Finally, this study subsequently identifies three distinctive association groups composed of TQM constructs and LO disciplines. These groups are further defined as individual dominant, Higher authority and product/material oriented.

- In (Ferguson – Amores, et..al, 2005) “*Strategies of Renewal: The Transition from Total Quality Management to the Learning Organization*” total Quality Management (TQM) and the Learning Organization (LO) are two management practices for dealing with the problem of organization renewal. From a more detailed study and with a transformational, dynamic and interactive perspective, the two are not only mutually non-exclusive but even that they are found to be mutually complementary in the renewal process. This article focuses on the process of TQM & LO transition on the premise that certain complementarities exist between the two systems that facilitate the implementation of organization renewal, and also on the identification of key factors facilitating the transition. The review of the literature, the comparative analysis of the two systems, and the presentation of a case study (Electrical and Fuel Handling Division – VISTEON) in which two of the authors have participated, is enriched by applying the perspective of ‘learning history’, constitute the nucleus of this article.

- In (LeBrasseur, et..al, 2002) “*Organizational Learning, Transformational Leadership and Implementation of Continuous Quality Improvement in Canadian Hospitals*” implementing continuous quality improvement (CQI) in acute care general hospitals was investigated as an occurrence of a paradigm shift and organizational learning. Presented

within a contextual framework, two case studies are reported, and are complemented by a survey of hospitals operating in Ontario, Canada. The findings support a top-down approach where the CEO exhibits transformational leadership and aligns the organization's strategy, structure, and culture to CQI. The conflicting stakeholder goals of quality of care and cost savings are harmonized. Organizational members undergo both a cognitive and behavioral adjustment centered on teamwork, facilitated by training and education. Teamwork and involvement of physicians remain long-term challenges.

- (Terziovski, et..al, 2000) *"Establishing mutual dependence between TQM and the learning organization: a multiple case study analysis"* reports on a theoretical framework based on Senge's principles and the Malcolm Baldrige National Quality Award (MBNQA) criteria. Qualitative data were gathered from five Australian companies that had established practices in the TQM field. Multiple cross-case content analyses were undertaken to evaluate the proposition that TQM and the Learning Organization are mutually dependent". The finding is that TQM principles and concepts underpin the evolution of the learning organization. The implication is that managers that are involved in TQM do not need a new mindset or paradigm called "learning organization". Organizations need to recognize that their continuous improvement activities as part of the TQM philosophy have created their "learning organization".

- (Sohal & Morrison, 1995) *"Is there a link between total quality management and learning organizations?"* focuses on an attempt to determine whether or not there is a link between TQM and learning organizations. Data from three TQM companies are tested against a series of building blocks for developing learning organizations. Total quality management tends to create the environment necessary for organizational

learning to occur. The learning organization creates competitive advantage by adapting to changing environments, continually improving and being able to absorb new concepts and innovations.

- In (Holloway, 1994) *“Total Quality Management, the Learning Organization and Post-compulsory Education”* the turbulence confronting educational institutions in the United Kingdom has led to the suggestion that any attempt to respond using established management principles and processes is likely to be dysfunctional. Total quality management (TQM) has been advanced as strategies that will enable educational institutions adapt to the greater market orientation and transform them into learning organizations. The paper identifies the key principles of TQM, critically reviewing the literature that examines their application in education and focusing on the post-compulsory sector. Secondly, selected linkages between the key principles and other approaches to the study of organizational behavior, including aspects of open systems theory, leadership, team working, training and staff development, and organizational culture, are examined. The concept of the learning organization is outlined and its relationship with TQM examined. The study concludes that TQM treats organizational change issues in educational institutions and the concept of the learning organization as unproblematic, ignoring issues of power, authority, resistance to change and double-loop learning.

CHAPTER THREE

METHOD AND PROCEDURES

(3-1): Introduction

(3-2): Study Methodology

(3-3): Study Population and Sample

(3-4): Study Tools and Data Collection

(3-5): Statistical Treatment

(3-6): Validity and Reliability

(3-1): Introduction

This chapter is divided into the following five sections: Study Methodology; Study Population and Sample; Study Tools and Data Collection; Statistical Treatment; Reliability and Validity.

(3-2): Study Methodology

Descriptive research involves collecting data in order to test hypotheses or to answer questions concerned with the current status of the subject (s) of a study.

Typical descriptive studies are concerned with the assessment of attitudes, opinions, demographic information, conditions, and procedures. The research design chosen for the study is the survey research. A survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. Survey research at its best can provide very valuable data. It represents considerable information more than asking questions and reporting answers; it involves careful design and execution of each of the components of the research process.

The researcher designed/adapted a survey instrument that could be administered to selected subjects. The purpose of the survey instrument was to collect data about the respondents on the Relationship within the Learning Organization Characteristics and their effects on adopting Total Quality Management criteria.

(3-3): Study Population and Sample

For this study to be credible, the sample chosen will represent the population that the researcher will investigate.

The populations of the study were the employees of Commercial Banks in Jordan. The samples of the study were the employees who occupy positions such as (General Manager, General Manager Assistant and HR & Administrative Managers). Table (3-1) shows the Commercial Banks in Jordan.

Table (3-1) Names of the Commercial Banks in Jordan

No.	Bank Name	No.	Bank Name
1	Arab Bank	10	Union Bank
2	Housing Bank for Trade & Finance	11	Blom Bank
3	Bank of Jordan	12	Bank Audi
4	Cairo Amman Bank	13	National Bank of Kuwait
5	Ahli Bank	14	HSBC Bank
6	Jordan Kuwait Bank	15	City Bank Bank
7	Arab Jordanian Investment Bank	16	Standard Chartered Bank
8	Arab Banking Corporation	17	Societe Generale Bank

9	Jordan Commercial Bank	18	Capital Bank
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Table (3-2) shows the demographic variables to study sample from Gender; Age; Education Level; Specialization and Experience.

Table (3-2) Descriptive sample to the demographic variables of the study.

No.	Variables	Categorization	Frequency	Percent
1	Gender	Male	107	59.4
		Female	73	40.6
2	Age	Less than 30 years	31	17.2
		Between 30 – 40 Years	72	40
		Between 41 – 50 years	62	34.4
		Above 51 Years	15	8.3
3	Education Level	BSc	101	56.1
		High Diploma	9	5
		Master	65	36.1
		PhD	5	2.8
4	Specialization	Accounting	50	27.8
		Business Administration	27	15
		Economics	19	10.6
		Financial & Banking Sciences	64	35.6

		Information Technology	7	3.9
		Others	13	7.2
5	Experience	Less than 5 years	36	20
		Between 5 – 10 Years	36	20
		Between 11 – 15 years	55	30.6
		Above 16 Years	53	29.4

Table (3-2) reports the results of descriptive analysis of demographic variables of respondents' members of the study sample. It is clear that 59.4% of the study sample is male, 40.6% is female. On the other hand, it is clear that 82.7% from study sample ranged between 30 and 51 years. This indicates a focus on the element of youth and new blood. On the educational level, that all members of the study sample have an academic qualification is a good sign in adopting with high educational qualifications to accomplish the work in the banking sector.

(3-4): Study Tools and Data Collection

The current study is two-fold, theoretical and practical. On the theoretical side, the researcher relied on the scientific studies/thoughts that are related to the current study. Whereas on the practical side, the researcher relied on descriptive and analytical methods using the practical manner to collect, analyze data and test hypothesis.

The data collection, manners analysis and programs used in the current study are based on two sources:

- 1. Secondary sources: books, journals, theses to write the theoretical framework of the study.**
- 2. Primary source: questionnaire that was designed to reflect the study objectives and questions.**

In this study, both primary and secondary data are used. The data collected for the model was through questionnaire. After conducting a thorough review of the literature pertaining to Learning Organization Characteristics and Total Quality Management Criteria, the researcher formulated the questionnaire instrument for this study.

The questionnaire instrumental sections are as follows:

Section One: *Demographic variables*. The demographic information was collected by closed-ended questions, through (5) factors.

Section Two: *Learning Organization Characteristics*. This section measured the Learning Organization Characteristics suggested from Senge (1999) (Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking), through (5) dimensions to measure and (40) items on a Likert-type scale. Mental Models was measured through (10) questions from (1) to (10). Personal Mastery was measured through (10) questions from (11) to (20). Team Learning was measured through (6) questions from (21) to (26). Shared vision was measured through (8) questions from (27) to (34). Systems thinking was measured through (6) questions from (35) to (40).

Section Three: *Total Quality Management Criteria*. This section measured the Total Quality Management Criteria suggested from Huey We (2004) (Leadership; Strategic Planning; Stakeholder and Market Focus; Staff Focus; Process Management), through (5) dimensions to measure and (24) items on a Likert-type scale.

(3-5): Statistical Treatment

The data collected from the responses of the study questionnaire was used through Statistical Package for the Social Sciences (SPSS) for analysis and conclusions.

Finally, the researcher used the suitable statistical methods that consist of:

- Cronbach's α to test reliability.
- Percentage and Frequency.
- Arithmetic Mean and Standard Deviation.
- Person correlation to measure the relationship within the Learning Organization Characteristics.
- Simple Linear and Multiple Regression analysis to Measure the impact of Learning Organization Characteristics on total quality management criteria.
- Relative important, that assigning due to:

$$\text{Class Interval} = \frac{\text{Maximum Class} - \text{Minimum Class}}{\text{Number of Level}}$$

$$\text{Class Interval} = \frac{5 - 1}{3} = \frac{4}{3} = 1.33$$

The Low degree from 1- less than 2.33

The Medium degree from 2.33 – 3.66

The High degree from 3.67 above.

(3-6): Validity and Reliability

(A) Validation

To test the questionnaire for clarity and to provide a coherent research questionnaire, a macro review which covers all the research constructs was accurately performed by academic reviewers - from Jordanian universities - specialized in Business Administration, Total Quality Management; Production and

Operation Management, and Statistics. Some items were added based on their recommendations. Some others were reformulated to become more accurate which is expected therefore to enhance the research instrument. The academic reviewers amount to (5) and the overall percent of respond (100%), (see appendix “2”).

(B) Study Tool Reliability

The reliability analysis applied the level of Cronbach Alpha (α) as the criteria of internal consistency which were at a minimum acceptable level ($\alpha \geq 0.65$) suggested by (Sekaran, 2003). The overall Cronbach Alpha (α) = (82.6). Whereas the High level of Cronbach Alpha (α) is to Leadership = (89.1). The lowest level of Cronbach Alpha (α) is to Staff Focus = (71.6). These results are the acceptable level as suggested by (Sekaran, 2003). The results are shown in Table (3-3) below.

Table (3-3)

Reliability of Questionnaire Dimensions

	No.	Dimensions	Alpha Value (α)
Learning Organization Characteristics	1	Mental Models	77.3
	2	Personal Mastery	74.2
	3	Team Learning	81.1
	4	Shared Vision	77.2
	5	Systems Thinking	73.7

Total Quality Management Criteria	6	Leadership	89.1
	7	Strategic Planning	82.8
	8	Stakeholder and Market Focus	72.6
	9	Staff Focus	71.6
	10	Process Management	86.6
ALL Questionnaire			82.6

CHAPTER FOUR

RESULTS ANALYSIS &

HYPOTHESIS TEST

(4-1): Introduction

(4-2): Study Questions and Answers

(4-3): Study Hypothesis Test

(4-1): Introduction

According to the purpose of the research and the research framework presented in the previous chapter, this chapter describes the results of the statistical analysis of the data collection for the research questions and research hypothesis. The data analysis includes a description of the Means and Standard Deviations for the questions of the study, and Person correlation to measure the relationship within the Learning Organization characteristics. Finally, the Simple Linear and Multiple Regression analysis are to measure the impact of Learning Organization characteristics on Total Quality management criteria.

(4-2): Study Questions and Answers

Question One: What is the level of importance of learning organization characteristics in Jordanian Commercial Banks? To answer this question the researcher split it into five sub questions:

Sub question One: What is the level of importance of the Mental Models in

Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, item of importance and level of importance as shown in Table (4-1).

Table (4-1) clarifies the level of importance of Mental Models, where the arithmetic means range between (4.32 - 4.54) compared with General Arithmetic mean amount of (4.42). It is observed that the High mean was to item "I have open and honest conversations with my department colleagues about our knowledge practices" with arithmetic mean (4.54) and standard deviation (0.50). While the lowest arithmetic mean was to item "I take time to think about what happens in my department, and how it agrees with my professional beliefs" With Average (4.32) and Standard deviation (0.47). In general, the level of importance of Mental Models in Jordanian Commercial Banks was High.

Table (4-1)

**Arithmetic mean, Standard deviation, Item of importance and level of importance to
Mental Models**

No.	Mental Models	Mean	Standard deviation	Item of importanc	Level of importan
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				e	ce
1	I take time to think about what happens in my department, and how it agrees with my professional beliefs.	4.32	0.47	8	High
2	I have open and honest conversations with my department colleagues about our knowledge practices.	4.54	0.50	1	High
3	When my assumption about work changes, I change my practices accordingly.	4.39	0.49	5	High
4	Staff members respect each other as professionals and colleagues when we meet.	4.39	0.49	5	High
5	I talk with my colleagues about changing our work practices.	4.42	0.49	3	High
6	I ask questions to my colleagues about why we do the things as bankers.	4.41	0.49	4	High
7	In my bank, we have a commitment to a shared vision of what our bank should become.	4.34	0.47	7	High
8	We have, as a staff, agreed on the principles and guiding practices that we will follow to create our desired future.	4.36	0.48	6	High
9	In my bank, we have agreed on the banking work practices that are important for us to use in the future.	4.51	0.50	2	High
10	I feel isolated from other members in my bank.	4.51	0.50	2	High
General Arithmetic mean and Standard deviation		4.42	0.23		

Sub question Two: What is the level of importance of the Personal Mastery in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-2).

Table (4-2) clarifies the level of importance of Personal Mastery, where the arithmetic means range between (3.86 - 4.47) compared with General Arithmetic mean amount of (4.22). It is observed that the High mean was to item "I work to improve my

professional knowledge and skills" with arithmetic mean (4.47) and Standard deviation (0.50). While the lowest arithmetic mean was to item "I focus my energy on achieving my bank and department goals, even when they are difficult to attain" With Average (3.86) and Standard deviation (0.80). In general, the level of importance of Personal Mastery in Jordanian Commercial Banks was High.

Table (4-2)

**Arithmetic mean, Standard deviation, Item of importance and level of importance to
Personal Mastery**

No.	Personal Mastery	Mean	Standard deviation	Item of importance	Level of importance
1	At my bank, I am encouraged by leaders to acquire skills and knowledge that help me to improve professionally	4.33	0.47	5	High
2	I work to improve my professional knowledge and skills	4.47	0.50	1	High
3	I have a desire to improve my professional skills and knowledge	4.37	0.48	4	High
4	I can envision how I would like my bank and department to function better to reach my bank desired outcomes	4.44	0.50	2	High
5	I have a clear understanding of the way my bank and department currently function	4.43	0.50	3	High
6	Realizing that I lack the knowledge and skills in certain areas makes me uncomfortable	4.32	0.47	6	High
7	Realizing that there are professional practices used in our bank, which should be changed, makes me uncomfortable	4.04	0.70	7	High
8	It is normal to have a discrepancy between the way my department functions and the way I wish it would function	4.00	0.83	8	High
9	Discrepancies between the way my department functions, and the way I wish it would function, motivate me to change my practices	3.91	0.82	9	High
10	I focus my energy on achieving my bank and department goals, even when they are difficult to attain	3.86	0.80	10	High
General Arithmetic mean and Standard deviation		4.22	0.24		

Sub question Three: What is the level of importance of the Team Learning in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-3).

Table (4-3) clarifies the level of importance of Team Learning, where the arithmetic means range between (3.71 - 4.05) compared with General Arithmetic mean amount of

(3.87). It is observed that the High mean was to item "When I meet with my colleagues I am able to listen to their professional ideas and consider them from their point of view" with arithmetic mean **(4.05)** and standard deviation **(0.76)**. While the lowest arithmetic mean was to item "We do not have time to work in teams because of the day-to-day issues and problems" with Average **(3.71)** and Standard deviation **(0.82)**. In general, the level of importance of Team Learning in Jordanian Commercial Banks was High.

Table (4-3)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Team Learning

No.	Team Learning	Mean	Standard deviation	Item of importance	Level of importance
1	I meet with my colleagues to deal with important issues pertaining to our department and bank.	3.86	0.97	3	High
2	When I meet with my colleagues I am able to listen to their professional ideas and consider them from their point of view.	4.05	0.76	1	High
3	When I meet with my colleagues to talk about banking issues, disagreements and conflicts arise.	4.03	0.80	2	High
4	When meeting with colleagues, differences of opinions are depersonalized and focused on genuine areas of disagreement.	3.79	0.83	4	High
5	I have meaningful professional interaction with my colleagues.	3.78	0.87	5	High
6	We do not have time to work in teams because of the day-to-day issues and problems.	3.71	0.82	6	High
General Arithmetic mean and Standard deviation		3.87	0.27		

Sub question Four: What is the level of importance of the Shared Vision in

Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-4).

Table (4-4) clarifies the level of importance of Shared Vision, where the arithmetic means range between (3.29 - 4.00) compared with General Arithmetic mean amount of (3.65). It is observed that the High mean was to item "I share my vision of a desirable future for our bank with other staff members" with arithmetic mean (4.00) and standard deviation (0.76). While the lowest arithmetic mean was to item "We keep our vision of the future in mind when solving everyday problems" with Average (3.29) and Standard deviation (0.95). In general, the level of importance of Shared Vision in Jordanian Commercial Banks was Medium.

Table (4-4)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Shared Vision

No.	Shared Vision	Mean	Standard deviation	Item of importance	Level of importance
1	I share my vision of a desirable future for our bank with other staff members	4.00	0.76	1	High
2	I trust our bank leaders to solve our problems	3.92	0.87	2	High
3	Our staff set the goals that we expect to achieve	3.78	0.81	3	High
4	Having a vision of the future has brought about changes in the way our staff members think and act	3.62	0.72	4	Medium
5	I can say what I think openly without limits or fear of reprisals	3.50	0.85	6	Medium
6	We keep our vision of the future in mind when solving everyday problems	3.29	0.95	8	Medium
7	We, as a staff, have agreed on the purpose of our bank	3.49	0.85	7	Medium
8	Experimenting is undertaken without fear of failure in our bank	3.60	0.85	5	Medium
General Arithmetic mean and Standard deviation		3.65	0.34		

Sub question Five: What is the level of importance of the Systems Thinking

in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-5).

Table (4-5) clarifies the level of importance of Systems thinking, where the arithmetic means range between (3.83 - 4.34) compared with General Arithmetic mean amount of (3.99). It is observed that the High mean was to item "Our leaders look at the

big picture, focusing on the purpose and direction of the bank" with arithmetic mean (4.34) and Standard deviation (0.71). While the lowest arithmetic mean was to items "I meet with leaders, in other levels and other banks, to discuss banking issues; when we make changes, in our bank we consider the effects of those changes on the customers" with Average (3.83) and Standard deviation (0.86) for two items. In general, the level of importance of Systems thinking in Jordanian Commercial Banks was High.

Table (4-5)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Systems thinking

No.	Systems thinking	Mean	Standard deviation	Item of importance	Level of importance
1	I meet with leaders, in other levels and other banks, to discuss banking issues	3.83	0.86	5	High
2	When we change our banking practices, we consider how they will help us better achieve the bank's purpose	3.84	0.91	4	High
3	When we make changes in our bank we consider the effects of those changes on the customers	3.83	0.86	5	High
4	When I make decisions in my department, I consider how they will impact on my colleagues	3.97	0.68	3	High
5	Our leaders look at the big picture, focusing on the purpose and direction of the bank	4.34	0.71	1	High
6	The leadership in my bank allows innovative practices to be adopted by the bank wide	4.12	0.71	2	High
General Arithmetic mean and Standard deviation		3.99	0.58		

Question Two: What is the level of importance of Total Quality Management criteria in Jordanian Commercial Banks? To answer this question the researcher split it into five Sub questions:

Sub question One: What is the level of importance of the Leadership in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-6).

Table (4-6) clarifies the level of importance of Leadership, where the arithmetic means range between (4.02 - 4.39) compared with General Arithmetic mean amount of (4.16). It is observed that the High mean was to item "The administrative leaders adequately understand the established purpose and mission of the bank" with arithmetic mean (4.39) and Standard deviation (0.49). While the lowest arithmetic mean was to item "The administrative leaders will learn initiative from the strength of benchmark banks as the referent materials of innovation and improvement" with average (4.02) and Standard deviation (0.72). In general, the level of importance of Leadership in Jordanian Commercial Banks was High.

Table (4-6)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Leadership

No.	Leadership	Mean	Standard deviation	Item of importance	Level of importance
1	The administrative leaders adequately understand the established purpose and mission of the bank	4.39	0.49	1	High
2	The administrative leaders are apt to accept innovation and challenges	4.17	0.70	2	High
3	The administrative leaders will know the need of Employees and Customers through communication channels or meetings	4.05	0.74	3	High
4	The administrative leaders will learn initiative from the strength of benchmark banks as the referent materials of innovation and improvement	4.02	0.72	4	High
General Arithmetic mean and Standard deviation		4.16	0.52		

Sub question Two: What is the level of importance of the Strategic

Planning in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-7).

Table (4-7) clarifies the level of importance of Strategic Planning, where the arithmetic means range between (3.91 - 4.12) compared with General Arithmetic mean amount of (3.99). It is observed that the High mean was to item "In order to improve professional skills, my bank encourages us to attend research and development activities" with arithmetic mean (4.12) and Standard deviation (0.76). While the lowest arithmetic mean was to item "My bank units will cooperate together to reach the goal of

promoting high quality of services" with Average (3.91) and Standard deviation (0.77).

In general, the level of importance of Strategic Planning in Jordanian Commercial Banks was High.

Table (4-7)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Strategic Planning

No.	Strategic Planning	Mean	Standard deviation	Item of importance	Level of importance
1	According to the main components and needs of banks development, my bank will recruit appropriate Employees	3.92	0.77	4	High
2	In order to promote service quality, my bank prepares the budget to purchase software and hardware annually	3.99	0.82	3	High
3	My bank units will cooperate together to reach the goal of promoting high quality of services	4.01	0.83	2	High
4	My bank provides appropriate awards for employees who bring up the ideas and methods of improving the quality of services	3.91	0.77	5	High
5	In order to improve professional skills, my bank encourages us to attend research and development activities	4.12	0.76	1	High
General Arithmetic mean and Standard deviation		3.99	0.64		

Sub question Three: What is the level of importance of the Stakeholders and Market Focus in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, standard deviation, Item of importance and level of importance as shown in Table (4-8).

Table (4-8) clarifies the level of importance of Stakeholders and Market Focus, where the arithmetic means range between (4.09 - 4.45) compared with General

Arithmetic mean amount of (4.24). It is observed that the High mean was to item “My bank will use the results of the evaluation to improve and promote the quality of service” with arithmetic mean (4.45) and Standard deviation (0.24). While the lowest arithmetic mean was to item “My bank provides guidance and assistance to employees who attract low number of customers” with average (4.09) and Standard deviation (0.74). In general, the level of importance of Stakeholders and Market Focus in Jordanian Commercial Banks was High.

Table (4-8)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Stakeholders and Market Focus

No.	Stakeholders and Market Focus	Mean	Standard deviation	Item of importance	Level of importance
1	My bank has made a short-term, medium-term, and long-term plan for bank affairs	4.11	0.78	4	High
2	My bank will hold activities periodically for the Employees and Customers to communicate and share working experiences with one another	4.14	0.77	3	High
3	My bank provides guidance and assistance to employees who attract low number of customers	4.09	0.74	5	High
4	My bank has established a reward system to motivate all Employees	4.42	0.23	2	High
5	My bank will use the results of the evaluation to improve and promote the quality of service	4.45	0.24	1	High
General Arithmetic mean and Standard deviation		4.24	0.39		

Sub question Four: What is the level of importance of the Staff Focus in

Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, Standard deviation, Item of importance and level of importance as shown in Table (4-9).

Table (4-9) clarifies the level of importance of Staff Focus, where the arithmetic means range between (3.55 - 4.41) compared with General Arithmetic mean amount of (3.97). It is observed that the High mean was to item "To fit the bank development, my bank has a comprehensive plan for training" with arithmetic mean (4.41) and Standard deviation (0.27). While the lowest arithmetic mean was to item "My bank has a good recruiting system for the Employees and Customers" with Average (3.55) and Standard deviation (0.52). In general, the level of importance of Staff Focus in Jordanian Commercial Banks was High.

Table (4-9)

Arithmetic mean, Standard deviation, Item of importance and level of importance to Staff

Focus

No.	Staff Focus	Mean	Standard deviation	Item of importance	Level of importance
1	To fit the bank development, my bank has a comprehensive plan for training	4.41	0.27	1	High
2	In my bank, there are timetables for every plan	4.06	0.34	2	High
3	In order to reduce cost, the departments within my bank share resources fully	3.87	0.58	3	High
4	My bank has a good recruiting system for the Employees and Customers	3.55	0.52	4	Medium
General Arithmetic mean and Standard deviation		3.97	0.66		

Sub question Five: What is the level of importance of the Process

Management in Jordanian Commercial Banks?

To answer this question the researcher uses the arithmetic mean, Standard deviation, Item of importance and level of importance as shown in Table (4-10).

Table (4-10) clarifies the level of importance of Process Management, where the arithmetic means range between (3.91 - 4.14) compared with General Arithmetic mean amount of (4.06). It is observed that the High mean was to item "My bank regularly gathers different information from operating management for planning bank affairs" with arithmetic mean (4.14) and Standard deviation (0.77). While the lowest arithmetic mean was to item " based on bank positioning and development objectives, the administrative leaders will set up a variety of quality objectives through different meetings" with average (3.91) and Standard deviation (0.77). In general, the level of importance of Process Management in Jordanian Commercial Banks was High.

Table (4-10)

Arithmetic mean, Standard deviation, Item of importance and level of importance to
Process Management

No.	Process Management	Mean	Standard deviation	Item of importance	Level of importance
1	The administrative leaders will create an organizational atmosphere of a High quality bank	4.01	0.83	5	High
2	Based on bank positioning and development objectives, the administrative leaders will set up a variety of quality objectives through different meetings	3.91	0.77	6	High
3	The administrative leaders will positively participate and carry out a variety of quality improvement activities	4.12	0.76	2	High
4	In order to improve quality and reduce cost, my bank has established an auditing system for administrative function	4.11	0.78	3	High
5	My bank regularly gathers different information from operating management for planning bank affairs	4.14	0.77	1	High

6	In my bank, every administrative activity has an established Standard operation	4.09	0.74	4	High
General Arithmetic mean and Standard deviation		4.06	0.52		

(4-3): Study Hypothesis Test

The researcher in this part tested the main hypothesis and study sub hypothesis, through Simple Linear, Multiple Regression analysis with (F) test using ANOVA table. As follows:

H01: There is a relationship within the learning organization characteristics

(Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking)?

To answer this hypothesis the researcher uses Person correlation to measure the relationship within the Learning Organization Characteristics as shown in Table (4-11).

Table (4-11)

Correlation Matrix within the Learning Organization characteristics

	Mental Models	Personal Mastery	Team Learning	Shared Vision	Systems Thinking
Mental Models	1.000				
Personal Mastery	0.469**	1.000			
Team Learning	0.502**	0.478**	1.000		

Shared Vision	0.038	0.099	0.139	1.000	
Systems Thinking	0.012	0.011	0.069	0.451**	1.000

** Correlation is significant at the 0.01 level (2-tailed).

From Table (4-11) it is observed that there are four significant relationships between Learning Organization Characteristics variables varied in Correlation Intensity. The High Correlation value between Mental Models and Team Learning Worth (0.502**) and is significant at level ($\alpha \leq 0.05$). On the other hand, the lowest Correlation value between Shared Vision and System Thinking Worth (0.451**) and is significant at level ($\alpha \leq 0.05$).

H02: There is a significant impact to Learning Organization characteristics (Mental Models; Personal Mastery; Team Learning; Shared Vision; Systems Thinking) on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

To test this hypothesis the researcher uses the multiple regression analysis to ensure the impact of Learning Organization characteristics on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-12).

Table (4-12)

Multiple regression analysis test results to the impact of Learning Organization characteristics on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R ²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The impact of Learning Organization characteristics on adopting Total Quality Management criteria	0.259	0.067	12.829	3.84	0.442	1	0.000
						178	
						179	

* The impact is significant at level ($\alpha \leq 0.05$)

From table (4-12) it is observed that there is a significant impact of Learning Organization characteristics on adopting Total Quality Management criteria in Jordanian Commercial Banks. The R was (0.259) at level ($\alpha \leq 0.05$) whereas the R^2 was (0.067). This means the (0.067) of adopting Total Quality Management criteria changes resulting from the changes in learning organization characteristics. As β was (0.442) this means that the increase of one unit in learning organization characteristics concerned will increase adopting Total Quality Management criteria value (0.442). Assuring significant

impact $F_{Calculate}$ was (12.829) and is significant at level ($\alpha \leq 0.05$) compared with F_{Tabled} was (3.84), and that Assuring invalid main hypothesis. Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Learning Organization characteristics on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

To ensure the impact of learning organization characteristics dimensions on adopting Total Quality Management criteria in Jordanian Commercial Banks, the researcher divides the hypothesis into five-sub hypothesis, and uses the Simple Regression analysis to test each sub hypothesis. As the following:

***H02-1:* There is no significant impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**

To test this hypothesis the researcher uses the Simple regression analysis to ensure the impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-13).

Table (4-13)

Simple regression analysis test results to the impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R ²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The impact of Mental Models on adopting Total Quality Management criteria	0.348	0.121	24.581	3.84	0.490	1	0.000
						178	
						179	

* the impact is significant at level ($\alpha \leq 0.05$)

From table (4-13) it is observed that there is a significant impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks. The R was (0.348) at level ($\alpha \leq 0.05$). Whereas the R^2 was (0.121). This means the (0.121) of adopting Total Quality Management criteria changes resulting from the changes in Mental Models. As β was (0.490) this means that the increase of one unit in Mental Models concerned will increase, adopting Total Quality Management criteria value (0.490). Assuring significant impact $F_{Calculate}$ was (24.581) and is significant at level ($\alpha \leq 0.05$) compared with F_{Tabled} was (3.84), and that Assuring invalid first sub hypothesis. Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Mental Models on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H_{02-2} : There is no significant impact of Personal Mastery on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

To test this hypothesis the researcher uses the Simple regression analysis to ensure the impact of Personal Mastery on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-14).

Table (4-14)

Simple regression analysis test results to the impact of Personal Mastery on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R ²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The impact of Personal Mastery on adopting Total Quality Management criteria	0.280	0.079	15.179	3.84	0.382	1	0.000
						178	
						179	

* the impact is significant at level ($\alpha \leq 0.05$)

From table (4-14) it is observed that there is a significant impact of Personal Mastery on adopting Total Quality Management criteria in Jordanian Commercial Banks.

The *R* was (0.280) at level ($\alpha \leq 0.05$) whereas the *R*² was (0.079). This means the (0.079) of adopting Total Quality Management criteria changes resulting from the

changes in Personal Mastery. As β was (0.382) this means that the increase of one unit in Personal Mastery concerned will increase adopting Total Quality Management criteria value (0.382). Assuring significant impact $F_{calculate}$ was (15.179) and is significant at level ($\alpha \leq 0.05$) compared with F_{tabled} was (3.84), and that Assuring invalid Second sub hypothesis. Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Personal Mastery on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-3: There is no significant impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

To test this hypothesis the researcher uses the Simple regression analysis to ensure the impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-15).

Table (4-15)

Simple regression analysis test results to the impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R ²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The Impact of Team Learning on adopting Total Quality Management criteria	0.169	0.029	5.226	3.84	0.198	1	0.023
						178	
						179	

* the impact is significant at level ($\alpha \leq 0.05$)

From table (4-15) it is observed that there is a significant impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks. The R was (0.169) at level ($\alpha \leq 0.05$) whereas the R^2 was (0.029). This means the (0.029) of adopting Total Quality Management criteria changes resulting from the changes in Team Learning. As β was (0.198) this means that the increase of one unit in Team Learning concerned will increase, adopting Total Quality Management criteria value (0.198). Assuring significant impact $F_{Calculate}$ was (5.226) and is significant at level ($\alpha \leq 0.05$) compared with F_{Tabled} was (3.84), and that Assuring invalid third sub hypothesis. Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Team Learning on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

***H02-4:* There is no significant impact of Shared Vision on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**

To test this hypothesis the researcher uses the Simple regression analysis to ensure the impact of Shared Vision on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-16).

Table (4-16)

Simple regression analysis test results to the impact of Shared Vision on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R ²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The impact of Shared Vision on adopting Total Quality Management criteria	0.557	0.311	26.884	3.84	0.884	1	0.000
						178	
						179	

* the impact is significant at level ($\alpha \leq 0.05$)

From table (4-16) it is observed that there is a significant impact of Shared Vision on adopting Total Quality Management criteria in Jordanian Commercial Banks. The R was (0.557) at level ($\alpha \leq 0.05$) whereas the R^2 was (0.311). This means the (0.311) of adopting Total Quality Management criteria changes resulting from the changes in Shared Vision. As β was (0.884), this means that the increase of one unit in Shared Vision concerned will increase, adopting Total Quality Management criteria value (0.884). Assuring significant impact $F_{Calculate}$ was (26.884) and is significant at level ($\alpha \leq 0.05$) compared with F_{Tabled} was (3.84), and that Assuring invalid fourth sub hypothesis.

Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Shared Vision on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

H02-5: There is no significant impact of Systems Thinking on adopting Total Quality Management criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

To test this hypothesis the researcher uses the Simple regression analysis to ensure the impact of Systems Thinking on adopting Total Quality Management criteria in Jordanian Commercial Banks. As shown in Table (4-17).

Table (4-17)

Simple regression analysis test results to the impact of Systems Thinking on adopting Total Quality Management criteria in Jordanian Commercial Banks

	(R)	(R²)	F Calculate	F Tabled	β	Degree of freedom	Sig*
The impact of Systems Thinking on adopting Total Quality Management criteria	0.546	0.299	33.619	3.84	0.960	1	0.000
						178	
						179	

* the impact is significant at level ($\alpha \leq 0.05$)

From table (4-17) it is observed that there is a significant impact of Systems Thinking on adopting Total Quality Management criteria in Jordanian Commercial Banks. The R was (0.546) at level ($\alpha \leq 0.05$) whereas the R^2 was (0.299). This means the (0.299) of adopting Total Quality Management criteria changes resulting from the changes in Systems Thinking. As β was (0.960), this means that the increase of one unit in Systems thinking concerned will increase adopting Total Quality Management criteria value (0.960). Assuring significant impact $F_{\text{calculate}}$ was (33.619) and is significant at level ($\alpha \leq 0.05$) compared with F_{tabled} was (3.84), and that Assuring invalid fifth sub hypothesis. Unaccepted null Hypothesis and accepted alternative Hypothesis:

There is significant impact of Systems Thinking on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).

CHAPTER FIVE

RESULTS DISCUSSION &

RECOMMENDATIONS

(5-1): Results

(5-2): Recommendations

(5-1): Results

The current study inquired a set of questions, placing the hypothesis and its relation to the impact within the study variables. The study arrived at many results that contributed to solve the study problem, answering the questions and hypothesis of the study. The main results are:

- **The level of importance of Mental Models; Personal Mastery; Team Learning and Systems thinking in Jordanian Commercial Banks was High.**
- **The level of importance of the Shared Vision in Jordanian Commercial Banks was Medium.**

- **The level of importance of the Leadership, Strategic Planning, Stakeholders and Market Focus, Staff Focus and Process Management in Jordanian Commercial Banks was High.**
- **There is a relationship between Mental Models and Personal Mastery with the value of (0.469**) at level ($\alpha \leq 0.05$).**
- **There is a relationship between Mental Models and Team Learning with the value of (0.502**) at level ($\alpha \leq 0.05$).**
- **There is a relationship between Personal Mastery and Team Learning with the value of (0.478**) at level ($\alpha \leq 0.05$).**
- **There is a relationship between Shared Vision and Systems Thinking with the value of (0.451**) at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Mental Models on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Personal Mastery on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Team Learning on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Shared Vision on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**
- **There is a significant impact of Systems Thinking on adopting Total Quality Management Criteria in Jordanian Commercial Banks at level ($\alpha \leq 0.05$).**

(5-2): Recommendations

Based on the above results, the researcher proposed the following recommendations:

- Enhance the vision of the banks to make changes in the way the staff members think and act.
- Enhance the employees' freedom of expressing their ideas and themselves without limitations.
- Support the top management to forecast the future vision to solve day-to-day problems.
- Develop the banks' objectives to face the environmental changes.
- Enhance employees' experience to develop banks' activities without fears from failure.
- Develop the banks' recruiting systems for the employees to gain competitive advantages.

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APPENDIX

Appendix (1)

Questionnaire to the Study

Analyzing the Relationship between the Learning Organization Characteristics and their Effects on Adopting Total Quality Management Criteria

Applied Study on Jordanian Commercial Banks

As a part of Thesis Submitted in Partial Fulfillment of the Requirements for the Master degree of Business Administration

Eyad E. Hudaib

Supervisor

Prof. Mohammad Al - Nuiami

Mr./Mrs. Greeting

The researcher aims to ***Analyze the Relationship within the Learning Organization Characteristics and their effects on adopting Total Quality Management criteria in Jordanian Commercial Banks.***

This Questionnaire is designed to collect information about your bank Learning Organization Characteristics and their effects on adopting Total Quality Management criteria. I would be very grateful if you could answer ALL questions as completely and accurately as possible.

Thanks for answering all the items in the Questionnaire

Eyad E. Hudaib

Part (1): Demographics Information

(1) Gender

Male Female

(2) Age

Less than 30 years Between 30 – 40 Years

Between 41 – 50 years Above 51 Years

(3) Education Level

BSc High Diploma

Master PhD

(4) Specialization

Accounting Business Administration

Economics Financial & Banking Sciences

Information Technology

Others

(5) Experience

Less than 5 years

Between 5 – 10 Years

Between 11 – 15 years

Above 16 Years

Part (2): Learning Organization Characteristics

First Factor: Mental Models

1. I take time to think about what happens in my department, and how it agrees with my professional believes.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

2. I have open and honest conversations with my department Colleagues about our knowledge practices.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

3. When my assumption about work changes, I change my practices accordingly.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

4. Staff members respect each other as professionals and colleagues when we meet.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

5. I talk with my colleagues about changing our work practices.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

6. I ask questions to my colleagues about why we do the things as bankers.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

7. In my bank, we have a commitment to a shared vision of what our bank should become.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

8. We have, as staff, agreed on the principles and guiding practices that we will follow to create our desired future.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

9. In my bank, we have agreed on the banking work practices that are important for us to use in the future.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

10. I feel isolated from other members in my bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Second Factor: Personal Mastery

11. At my bank, I am encouraged by leaders to acquire skills and knowledge that help me to improve professionally.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

12. I work to improve my professional knowledge and skills.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

13. I have a desire to improve my professional skills and knowledge.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

14. I can envision how I would like my bank and department to function better to reach my bank-desired outcomes.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

15. I have a clear understanding of the way my bank and department currently function.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

16. Realizing that I lack the knowledge and skills in certain areas makes me uncomfortable.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

17. Realizing that there are professional practices used in our bank which should be changed makes me uncomfortable.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

18. It is normal to have a discrepancy between the way my department functions and the way I wish it would function.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

19. Discrepancies between the way my department functions, and the way I wish it would function, motivate me to change my practices.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

20. I focus my energy on achieving my bank and department goals, even when they are difficult to attain.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Third Factor: Team Learning

21. I meet with my colleagues to deal with important issues pertaining to our department and bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

22. When I meet with my colleagues I am able to listen to their professional ideas and consider them from their point of view.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

23. When I meet with my colleagues to talk about banking issues, disagreements and conflicts arise.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

24. When meeting with colleagues, differences of opinions are depersonalized and focused on genuine areas of disagreement.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

25. I have meaningful professional interaction with my colleagues.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

26. We do not have time to work in teams because of the day-to-day issues and problems.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Fourth Factor: Shared Vision

27. I share my vision of a desirable future for our bank with other staff members.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

28. I trust our bank leaders to solve our problems.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

29. Our staff set the goals that we expect to achieve.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

30. Having a vision of the future has brought about changes in the way our staff members think and act.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

31. I can say what I think openly without limits or fear of reprisals.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

32. We keep our vision of the future in mind when solving everyday problems.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

33. We, as a staff, have agreed on the purpose of our bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

34. Experimenting is undertaken without fear of failure in our bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Fifth Factor: Systems Thinking

35. I meet with leaders in other levels and other banks to discuss banking issues.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

36. When we change our banking practices, we consider how they will help us better achieve the banks purpose.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

37. When we make changes, in our bank we consider the effects of those changes on the customers.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

38. When I make decision in my department, I consider how they will impact on my colleagues.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

39. Our leaders look at the big picture, focusing on the purpose and direction of the bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

40. The leadership in my bank allows innovative practices to be adopted by the bank wide.

Strongly Agree Neutral Disagree Strongly Disagree

Part (3): Total Quality Management Criteria

First Criterion: Leadership

1. The administrative leaders adequately understand the established purpose and mission of the bank.

Strongly Agree Neutral Disagree Strongly Disagree

2. The administrative leaders are apt to accept innovation and challenges.

Strongly Agree Neutral Disagree Strongly Disagree

3. The administrative leaders will know the need of Employee and Customers through communication channels or meetings.

Strongly Agree Neutral Disagree Strongly Disagree

4. The administrative leaders will learn initiative from the strength of benchmark banks as the referent materials of innovation and improvement.

Strongly Agree Neutral Disagree Strongly Disagree

Second Criterion: Strategic Planning

5. According to the main components and needs of banks development, my bank will recruit appropriate Employees.

Strongly Agree Neutral Disagree Strongly Disagree

6. In order to promote service quality, my bank prepares the budget to purchase software and hardware annually.

Strongly Agree Neutral Disagree Strongly Disagree

7. My bank units will cooperate to reach the goal of promoting high quality of services.

Strongly Agree Neutral Disagree Strongly Disagree

8. My bank provides appropriate awards for employees who bring up the ideas and methods of improving the quality of services.

Strongly Agree Neutral Disagree Strongly Disagree

9. In order to improve professional skills, my bank encourages us to attend research and development activities.

Strongly Agree Neutral Disagree Strongly Disagree

Third Criterion: Stakeholders and Market Focus

10. My bank has made a short-term, medium-term, and long-term plan for bank affairs.

Strongly Agree Neutral Disagree Strongly Disagree

11. My bank will hold activities periodically for the Employees and Customers to communicate and share working experiences with one another.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

12. My bank provides guidance and assistance to employees who attract low number of customers.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

13. My bank has established a reward system to motivate all Employees.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

14. My bank will use the results of the evaluation to improve and promote the quality of service.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Fourth Criterion: Staff Focus

15. To fit the bank development, my bank has a comprehensive plan for training.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

16. In my bank, there are timetables for every plan.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

17. In order to reduce cost, the departments within my bank share resources fully.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

18. My bank has a good recruiting system for the Employees and Customers.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

Fifth Criterion: Process Management

19. The administrative leaders will create an organizational atmosphere of a High quality bank.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

20. Based on bank positioning and development objectives, the administrative leaders will set up a variety of quality objectives through different meetings.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

21. The administrative leaders will positively participate and carry out a variety of quality improvement activities.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

22. In order to improve quality and reduce cost, my bank has established an auditing system for administrative function.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

23. My bank regularly gathers different information from operating management for planning bank affairs.

Strongly Agree Neutral Disagree Strongly Disagree
Agree

24. In my bank, every administrative activity has an established Standard operation.

Strongly Agree Neutral Disagree Strongly Disagree
Agree