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Impact of Effective Leadership Behavior on TQM by Continuous Improvement

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Abstract: *The purpose of this work is to establish a frame of reference for the study of the relationship between two concepts, effective leadership as independent and continuous improvement, traditionally treated as a dependent, as well as the effect of the relationship on the total quality management. After a brief review of the literature in each of the fields of study, we turn to relate these concepts, raising a series of research questions, with which we intend to lay new foundations for future prescriptions on management aimed at improving total quality management by adopting continuous improvement by the leadership, the main instrument of the study is a survey and its analysis by using structural modeling method. The study concluded that adopting a leadership for continuous improvement contributes significantly to improving the total quality management of organizations.*

Keywords*: Task-oriented, Relations-Oriented, Change-Oriented, External*

I. INTRODUCTION

The incorporation of activities related to quality in the health sector is relatively recent (Sischo & Broder, 2011). In the field of primary care, the first experiences began in the late eighties, mainly aimed at verifying the level of quality or the presence of structural requirements (Reddington et al., 2015). However, in many cases, the interventions carried out are limited which aimed at fulfilling the organization's objectives and may be considered self-limited. In this sense, the literature points out that "it cannot be affirmed that the philosophy of quality has permeated the Iraqi health system, and the systematic development of activities related to quality is far from widespread" (Hilfi et al., 2013). The considerations that the different aspects of an organization determine its performance and achievements, and that improvement initiative must have logic within a global quality plan; demand the incorporation of changes in the focus of the organization. Quality that affects the operation of the organization, its values, the roles played by professionals, the processes that take place in it, and the relationships with the people it provides its services to (Alvesson, 2018). Basically this is the idea of organizational change that has been suggested from different forums and that underlies the concept of total quality management.

In dynamic environments, where resources are scarce, leaders need to assess changing situations and adopt relevant plans. In this regard, it is significant to examine what roles the leader plays during uncertain times (Petit, 2012). Organizational uncertainty does not always exert a negative influence on leadership behavior. Uncertain situations generally represent leaders' positive opportunities to demonstrate leadership (De Hoogh, 2004). Depending on the situation, Leaders can increase organizational effectiveness or performance in uncertain times. On the other hand, the traditional role of the leader is to continuously train, motivate, educate, and develop followers in order to improve organizational effectiveness and outputs and achieve total quality management

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(Oakland, 2014). Total quality management helps to face the challenge of changing the culture and functioning of organizations necessary to combine the provision of services geared to the needs and expectations of users and the co-responsibility of clinicians in management, overcoming the dilemma between profession and management to achieve greater efficiency and overall results (Goetsch & Davis,2014).

Accordingly, organizations are looking for factors that could help to improve the quality, and as some literature proved that continuous improvement can be one of the critical factors to success, so it can be said that effective leaership has to adopt continuous improvement to the total quality management.

The purpose of this research is to examine whether the total quality management is influenced by the level of leadership behaviors associated with continuous improvement.

II. LITERATURE REVIEW

Effective Leadership Behavior

The most important characteristic of the contemporary business environment is the complexity that its effects on business organizations reflect positively or negatively, in light of the organization's ability to manage contradictions in the appropriate way and behavior (Yukl, , 2012).

Leadership behavior is one of the factors that are greatly affected by the movement of the group and helps in creating the human interaction necessary to achieve the goals of the individual and the organization alike (Nanjund & Swamy, 2014). It is noted that leadership is a relationship between the individual and the group, and often this individual is (the leader) and the group is (subordinate, or members) and the leader undertakes the process of directing and influencing the behavior of this group in various legitimate ways and means in order to achieve common goals between them effectively (Mahsud et al., 2010). Effective leadership behavior can be defined as a management strategy whose objective is for the organization to satisfy in a balanced way the needs and expectations of customers, employees, shareholders, and the company in general.

Effective leadership behavior includes “Task-oriented, Relations-oriented, change-oriented and external” (Yukl,2012)

Table 1. Effective Leadership Behaviors Dimensions

Task-oriented	Clarifying
	Planning
	Monitoring operations
	Problem solving
Relations-oriented	Supporting
	Developing
	Recognizing
	Empowering
Change-oriented	Advocating change
	Envisioning change
	Encouraging innovation
	Facilitating collective learning
External	Networking
	External monitoring
	Representing

Continuous Improvement

The process of continuous improvement, or Kaizen (in Japanese 改善) is a two-component word meaning "change for the better", a means of achieving continuous improvement and a philosophy invented by Taiichi Ohno to lead industrial and financial institutions (Paraschivescu & cotîrleț, 2015), as well as the possibility of its application in all aspects of life, dependent on analysis and process. . In the field of business and industries, the word "kaizen" usually refers to activities that constantly improve all aspects of work, such as industry and administrative management (Carnerud et al., 2018), which improve unified activities and work methods. The Kaizen philosophy essentially works to prevent wastage of energy, effort and time. The theory was applied in several fields during the reform of Japan after the Second World War and since then it has spread to business fields all over the world (Hutchins, 2012).

And continuous improvement has to have four steps: plan, do, check, and act as it shown in Figure 1.

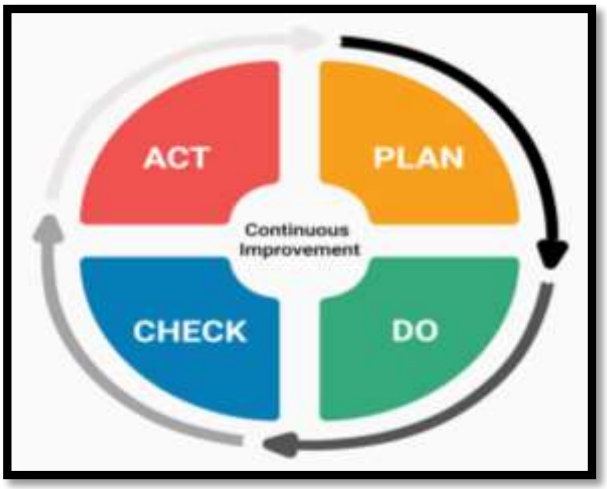

Figure 1. Continuous Improvement

And there are key routines associated with CI with some constituent behaviors (Bessant et al.,2001) as it shown in Table 2.

Table 2. Key Routines of CI

Ability	Constituent behaviours
'Understanding CI' - the ability to articulate the basic values of CI	•people at all levels demonstrate a shared belief in the value of small steps and that everyone can contribute, by themselves being actively involved in making and recognising incremental improvements. •when something goes wrong the natural reaction of people at all levels is to look for reasons why etc. rather than to blame individual(s) •people make use of some formal problem-finding and solving cycle
'Getting the CI habit' - the ability to generate sustained involvement in CI	•people use appropriate tools and techniques to support CI •people use measurement to shape the improvement process •people (as individuals and/or groups) initiate and carry through CI activities - they participate in the process •closing the loop - ideas are responded to in a clearly defined and timely fashion - either implemented or otherwise dealt with
'Focusing CI' - the ability to link CI activities to the strategic goals of the company	•individuals and groups use the organisation's strategic goals and objectives to focus and prioritise improvements everyone understands (i.e. is able to explain) what the company's or department's strategy, goals and objectives are. •individuals and groups (e.g. departments, CI teams) assess their proposed changes (before embarking on initial investigation and before implementing a solution) against departmental or company objectives to ensure they are consistent with them. •individuals and groups monitor/measure the results of their improvement activity and the impact it has on strategic or departmental objectives. •CI activities are an integral part of the individual or groups work, not a parallel activity
'Leading the way' - the ability to lead, direct and support the creation and sustaining of CI behaviours	•managers support the CI process through allocation of time, money, space and other resources •managers recognise in formal (but not necessarily financial) ways the contribution of employees to CI •managers lead by example, becoming actively involved in design and implementation of CI •managers support experiment by not punishing mistakes but by encouraging learning from them
'Aligning CI' - the ability to create consistency between CI values and behaviour and the organisational context (structures, procedures, etc.)	•ongoing assessment ensures that the organisation's structure and infrastructure and the CI system consistently support and reinforce each other •the individual/group responsible for designing the CI system design it to fit within the current structure and infrastructure •individuals with responsibility for particular company processes/systems hold ongoing reviews to assess whether these processes/systems and the CI system remain compatible •people with responsibility for the CI system ensure that when a major organisational change is planned its potential impact on the CI system is assessed and adjustments are made as necessary
'Shared problem-solving' - the ability to move CI activity across organisational boundaries	•people co-operate across internal divisions (e.g. cross-functional groups) in CI as well as working in their own areas •people understand and share an holistic view (process understanding and ownership) •people are oriented towards internal and external customers in their CI activity •specific CI projects with outside agencies - customers, suppliers, etc. - are taking place •relevant CI activities involve representatives from different organisational levels

Total Quality Management

Total quality management is known as a business management strategy that consists of studying and evaluating the concept of quality in each of the phases of a production process. The purpose is the constant improvement of goods and services offered and the achievement of greater customer satisfaction. (Oakland, 2014) Total quality management is a management strategy aimed at creating an awareness of quality in all processes carried out in any type of organization.

Another way of understanding this concept is as mechanisms for studying and monitoring the processes and human work of a firm. It is also called (TQM) (Sallis, 2014). The denomination of total is understandable from the perspective that the quality required and evaluated in the strategy includes both the different levels and elements of a company and the human group that works in it. In other words, the search for quality prevails in each of the different organizational processes (Wang et al., 2012).

This concept was born in the 1950s from the hand of the Japanese industrial sector, although it enjoyed its expansion and greater recognition from 1983 in the West thanks to a study published in the Harvard Business Review (Dahlgaard et al.,2013). With the concept of total quality, it is intended that quality is not the responsibility

of a specific department of the company, but that this responsibility is shared with all the members of the organization.

Therefore, when speaking of total quality, it is not just about the quality of the product or service offered by the organization, but it goes further, referring to the integral quality of the processes and systems. In other words, it is recognized that to achieve a quality final product or service, the processes, and systems used in their execution must also be of quality (Fonseca,2015).

It can be affirmed that TQM (Total Quality Management) is the implantation of quality at all levels of the organization until all the members of the company are committed to the collective and global achievement of the maximum quality .A good total quality management system will achieve (Oakland, 2014):

1) Higher levels of consumer/customer satisfaction.

2) Increased productivity and profit margins.

3) Greater cohesion and coordination of the different processes and departments of a company.

4) Optimization of the use of resources and reduction of costs for the company, that is efficiency.

III. RESEARCH METHODOLOGY

Instrument of the study

The main tool of the study is the questionnaire, distributed to a sample of respondents in health sector , the number of distributed questionnaires is 150, 123 questionnaires were retrieved, and among them were a number of questionnaires that are not valid for statistical analysis, and the valid questionnaires for statistical analysis are 109 questionnaires, the questionnaire consists of three main parts, the first part included the EL variable and the four dimensions (task-oriented (EL1), relations-oriented (EL2), change-oriented (EL3), external (EL4)) , and the second part included the mediator variable continuous improvement (CI), and the third part included the dependent variable total quality management (TQM), and the model of the study is shown in Figure 2, and the questionnaire was subject to the validity and reliability test, and it is clear from the results of the Cronbach Alpha test in Table 3, that the coefficient of the EL is (0.917) , And for CI is (0.812), and for TQ is (0.845), this means that the questionnaire has good internal consistency.

Table 3. Cronbach Alpha Results

Var.	Items	Value
EL	VAR01- VAR016	0.917
CI	VAR017- VAR022	0.812
TQ	VAR023- VAR029	0.845

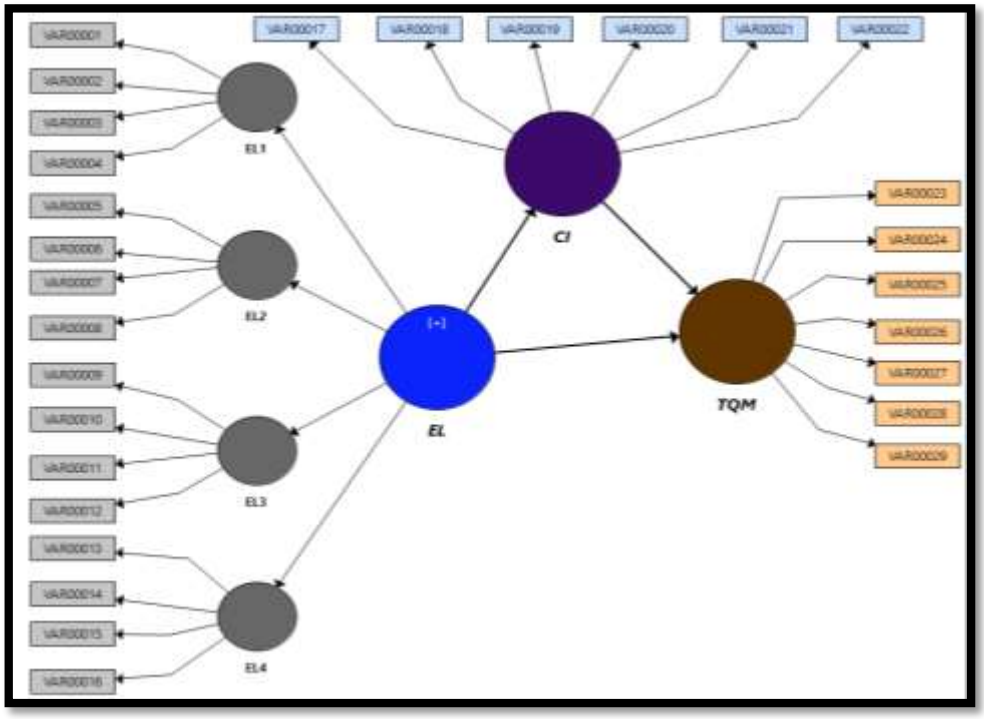

Figure 2. Study Model

IV. RESULTS

Table 4 shows that there is a strong correlation between EL and TQ (0.600) and it is a positive relationship, meaning that increasing the first variable leads to increasing the second variable and that this relationship is significant depending on the value of T, which is greater than the tabular value, within the sample size and the significance level for the study. Regarding the basic dimensions of the leadership behavior, it is also clear that there is a strong correlation between EL1 and TQ (0.672) which is a positive relationship, that is, that the increase of the first variable leads to an increase in the second variable, and that this relationship is significant, depending on the value of T that is greater than the tabular value, within the sample size and the significance level for the study. Likewise, there is a strong correlation between EL2 and TQ (0.716) which is a positive relationship, meaning that the increase of the first variable leads to an increase in the second variable and that this relationship is significant, depending on the value of T which is greater than the tabular value, within the sample size and the significance level for the study. With respect to EL3, it is clear that there is a strong correlation between EL3 and TQ (0.392) which is a positive relationship, meaning that increasing the first variable leads to increasing the second variable and that this relationship is significant, depending on the value of T, which is greater than the tabular value, within the sample size and the significance level for the study. And there is a strong correlation between EL4 and TQ (0.739) which is a positive relationship, meaning that the increase of the first variable leads to an increase in the second variable and that this relationship is significant, depending on the value of T which is greater than the tabular value, within the sample size and the significance level for the study. Also, there is a strong correlation between EL and CI (0.525) which is a positive relationship, meaning that the increase of the first variable leads to an increase in the second variable and that this relationship is significant, depending on the value of T which is greater than the tabular value, within the sample size and the significance level for the study.

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And finally, there is a strong correlation between CI and TQ (0.950) which is a positive relationship, meaning that the increase of the first variable leads to an increase in the second variable and that this relationship is significant, depending on the value of T which is greater than the tabular value, within the sample size and the significance level for the study.

Table 4. Correlation Coefficient of the Variables

v.	EL1	EL2	EL4	EL5	EL	CI	TQM
EL1	1	.568**	.244*	.682**	.566**	.569**	.672**
Sig. (2-tailed)		.000	.011	.000	.000	.000	.000
EL2	.568**	1	.538**	.453**	.670**	.657**	.716**
Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
EL3	.244*	.538**	1	.181	.793**	.410**	.392**
Sig. (2-tailed)	.011	.000		.060	.000	.000	.000
EL4	.682**	.453**	.181	1	.505**	.614**	.739**
Sig. (2-tailed)	.000	.000	.060		.000	.000	.000
EL	.566**	.670**	.793**	.505**	1	.525**	.600**
Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
CI	.569**	.657**	.410**	.614**	.525**	1	.950**
Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
TQM	.672**	.716**	.392**	.739**	.600**	.950**	1
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	

Regression

Table 5 indicates that there is a strong effect between EL and TQ and it is a positive relationship, where the value of the regression coefficients is (B0= 0.014, B= 0.557), and this means that the value of the effect is (0.557), and the explanatory model is (0.360) from the changes taking place in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study. Regarding the basic dimensions of the leadership behavior, it is clear that there is a strong effect between EL1 and TQ and it is a positive relationship, where the value of the regression coefficients is (B0= 0.018 , B1= 0.453), and this means that the value of the effect is (0.453), and the explanatory model is (0.452) from the changes that occur in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study. Likewise, there is a strong effect between EL2 and TQ and it is a positive relationship, where the value of the regression coefficients is (B0= 0.020 , B2= 0.416), and this means that the value of the effect is (0.416), and the explanatory model is (0.513) from the changes that occur in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study. Regarding EL3, there is a strong effect between EL3 and TQ and it is a positive relationship, where

the value of the regression coefficients is (B0= 0.30 , B3= 0.150), and this means that the value of the effect is (0.150), and the explanatory model is (0.153) from the changes that occur in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study.

Finally, there is a strong effect between EL4 and TQ and it is a positive relationship, where the value of the regression coefficients is (B0= 0.014 , B4= 0.557), and this means that the value of the effect is (0.557), and the explanatory model is (0.360) from the changes that occur in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study. Also, there is a strong effect between CI and TQ and it is a positive relationship, where the value of the regression coefficients is (B0= 0.002 , B= 0.930), and this means that the value of the effect is (0.930), and the explanatory model is (0.903) from the changes that occur in the dependent variable and that this relationship is significant, depending on the value of the calculated F, which is greater than the tabular value, within the sample size and the level of significance approved for the study.

Table 5. Summary of Regression Analysis

Var.	B0	B1	Std.E.	R2	F	Sig.
EL1	0.018	0.453	0.048	0.452	88.214	0.000
EL2	0.020	0.416	0.039	0.513	112.144	0.000
EL3	0.30	0.150	0.030	0.153	19.397	0.000
EL4	0.017	0.476	0.042	0.546	128.147	0.000
EL	0.014	0.557	0.072	0.360	60.135	0.000
CI	0.002	0.930	0.030	0.903	390.12	0.000

Path analysis

Table 6 Figure 3 indicate that there is a strong effect between EL and TQ and it is a positive relationship, as the value of the direct effect is (0.258) and it is a strong and significant relationship within the sample size and the significance level of the study. There is also a strong effect between EL and CI and it is a positive relationship, as the value of the direct effect is (0.645) , it is a strong and significant relationship within the sample size and the significance level of the study. Also, there is a strong effect between CI and TQ and it is a positive relationship, as the value of the direct effect is (0.585) was a strong and significant relationship within the sample size and the significance level of the study.

The value of the indirect effect is (0.377), which is a significant relationship within the sample size and the level of significance approved for the study. We conclude that the value of the path analysis demonstrated that the indirect effect through the mediator variable is greater than the value of the direct effect without the mediator variable, that is, the causal relationship between the two variables is better in the case of the mediator variable, and that the relationship improved.

Table 6. Path Analysis

Var.	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
CI ..> TQ	0.585	0.584	0.112	5.233	0.000
EL ..> CI	0.645	0.642	0.095	6.755	0.000
EL ..> EL1	0.857	0.859	0.036	23.52	0.000
EL ..> EL2	0.893	0.893	0.026	34.165	0.000
EL ..> EL3	0.871	0.873	0.027	32.296	0.000
EL ..> EL4	0.88	0.88	0.029	30.737	0.000
EL ..> TQ	0.258	0.268	0.117	2.218	0.027
EL ..> CI ..> TQ	0.377	0.37	0.07	5.4	0.000

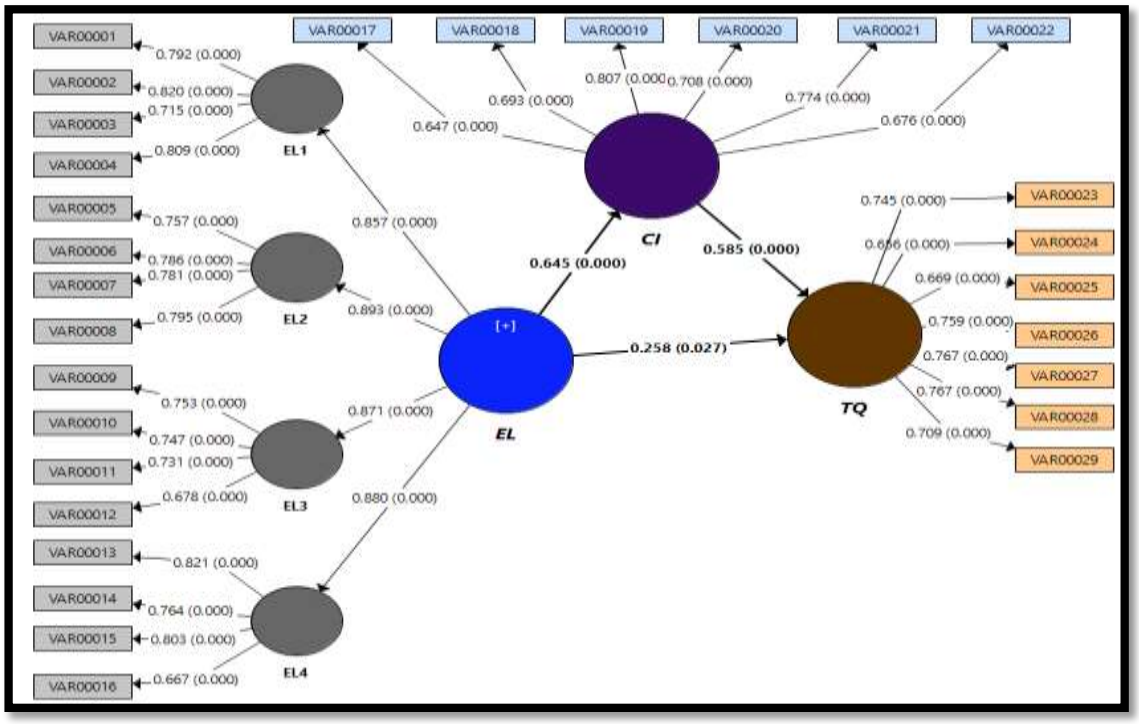

Figure 3. Structural Model

V. DISCUSSION AND CONCLUSION

The uncertainty in the organizational environment has a great influence on the members of the organization because organizations are completely tied to the conditions existing in their business. In particular, considering that organizations face more competitive environments than previously, dealing adequately with complex and turbulent organizational environments has become one of the greatest responsibilities for leaders. For example, organizational uncertainty always accompanies organizational change and such change could have an influence between the interaction between leaders and followers.

Sometimes organizational uncertainty is not only challenging but the key to achieving substantial changes and for this, the leader is expected to be able to effectively initiate change organizational (Lalonde, 2004). Most studies of leadership under conditions of uncertainty have been concerned with the appropriate leadership behavior to deal with organizational uncertainty and the effective influence of leaders on subordinates under such conditions; however, the means uncertain environments are likely to lead to difficult situations, which could influence negatively leadership behaviors. Particularly in the development of resources humans under conditions of organizational uncertainty, the role of the leader is crucial because it is assumed that members of an organization have difficulty developing their work in environments changing without the direction and guidance of the leader (Clercy, 2005).

The study proved that task-oriented with planning, controlling, and problem-solving lead to continuous improvement and are a positive factor in achieving overall quality, and these results are consistent with (Kumar & Sharma, 2016) which indicates that planning and controlling lead to continuous improvement to the total quality management, as well as a study (Hunt et al., 2005) that It indicates that problem solving is an essential factor for continuous improvement and quality. Likewise, Relations oriented actively participates in continuous improvement, which is a key factor in the total quality. Supporting and developing helps to improve the quality of the outputs (Yukl, 2012), and empowerment is the key to total quality management success (Gatchalian, 1997). The results also proved that the change contributes to improving the quality requirements and this is in line with (Iqbal & Asrar, 2018) that the change is important and vital to improving the total quality management.

The results have proven that the factors of the external environment contribute to continuous improvement and the achievement of comprehensive quality, and this result is in line with (Dilawo & Salimi, 2019) as the external networks and controlling are among the factors that achieve a comprehensive quality.

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