

The Implementation of Quality Circles in the Public-Service Organizations. A Case Study: The Syrian Communications Company

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Abstract

This study addressed the implementation of quality Circles in public-service organizations according to a case study of the Syrian communications company, through the definition of the concept of quality Circles and the mechanism for its work, and to identify the availability of the main requirements for the implementation of quality Circles, through four main variables, which are: Organizational culture, Training, Awareness and Understanding of the higher administration of the concept of quality Circles, in response to and support of the higher administration for the implementation of quality Circles.

The researcher has presented a number of recommendations which conform to the results reached, the most important results were: the lack of a sufficient level of organizational culture and training, the lack of a sufficient level of awareness and recognition at the higher administration about the concept of quality Circles, and the lack of a sufficient level of response and support at the higher administration about the implementation of quality Circles in Syrian Communications Company. Therefore, quality Circles can not be applied in the studied company.

Keywords: quality circles, higher administration, organizational culture, continuous improvement.

1. Introduction

Longer quality Circles (QC) are one of the methods used in Japanese management which have been proved successful, and one of the important techniques in the continuous improvement of quality (Continual improvement), and their concept is based on involving workers along with the management in making decisions and finding solutions for work obstacles (Welekar, Kulkarni, 2013), and they seek the assessment of performance and the improvement of the financial and moral income of the organization and workers (Kalirawna, Attri, Dev, 2015). To achieve all that, the company depends on statistical methods and techniques through which it collects information about imbalance points and their causes, and it analyzes them and then presents the appropriate solutions, in order to achieve the fine-tuning of operations, improvement in performance and production in both quantity and quality.

2. The Research Problem

The main problem of the research is crystallized in the following question: Are the quality Circles' implementation requirements available at The Syrian Communications Company?

Therefore, the main problem of the research will be addressed through answering the following questions:

1. What is the organizational culture adopted in Syrian Communications Company?
2. What aware and understanding is the higher administration in the Syrian communications company about the concept of quality Circles?
3. What responsive and supportive of the implementation of quality Circles is the higher administration in Syrian Communications Company?
4. What is the level of training in Syrian Communications Company?

3. Research Objectives

The research aims to achieve the following:

1. Identify the concept and importance of quality Circles.

2. The availability of the main requirements for the implementation of quality Circles in the Syrian Communications Company through the following:

- ❑ Identify the appropriate organizational culture adopted in for the implementation of quality Circles;
- ❑ Identify the awareness and understanding of the higher administration in the Syrian Communications Company and the concept of quality Circles;
- ❑ The study of the response and support of higher administration in the Syrian Communications Company for the implementation of quality Circles;
- ❑ Identify the level of training in the Syrian Communications Company.

4. The importance of the research

Public-service Organizations in Syria are interested in developing their work teams, confirming the participation of the workers in problem solving for the purpose of quality improvement.

This research is modern and authentic in terms of measuring and analyzing the availability of the quality Circles requirements implementation in public-service organizations in Syria, and the research is by itself a scientific contribution in defining the concept of quality Circles, and the basic requirements for quality Circle team-building and is also a scientific contribution which benefits public-service organizations, especially in identifying their strengths and weaknesses which helps them to lay solid foundations for the continuous improvement of quality based on the participation of workers and the development of their work teams.

5. Research Hypotheses

The researcher built the research hypotheses based on the search problem and objectives, as follows.

The main hypothesis of the research is: The implementation requirements of the quality Circles are available at the Syrian Communications Company.

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And the following sub-hypothesis are ramifications of it:

- ❑ The First sub-hypothesis: the Syrian Communications Company has an organizational culture that supports the implementation of quality Circles.
- ❑ The Second sub- hypothesis: The higher administration has awareness and understanding of the concept of quality Circles in the Syrian Communications Company.
- ❑ The third Sub-hypothesis: the higher administration is responsive and supportive about the implementation of quality Circles in the Syrian Communications Company.
- ❑ The fourth sub-hypothesis: there is a level of appropriate training for the implementation of quality Circles in Syrian Communications Company.

6. Literature Review

The studies (Kumar, 2015), (2014, Jozsef, Blaga), (Welekar, Kulkarni, 2013), (2012, Blaga, Jozsef), (Kannan, Govinda Rajan, 2011) have shown the implementation of quality Circles and how they are applied and they have also shown the higher administration's support of the organizations that apply them and their response to that application, through the provision of financial and human support and all the necessary capabilities for their work, indicating the support and superiority of the public sector and its easy implementation methods, and the numerous benefits resulting from the application, and the formation of a quality Circles and their most important demands, and their use of quality control tools in their work, in order to achieve the goals and objectives of the organizations.

6.1. The definition and characteristics of quality Circles

- ❑ According to Singh, Agarwal, a quality Circle is a group of workers that work continuously as a part of the activity control, censorship and improvement of an organization; using the techniques of quality control (Singh, Agarwal, 2014, p. 2).
- ❑ And for Subbulakshmi, Nagarajan, Felix, a quality Circle is a small group of workers from all organizational levels in an organization, who voluntarily participate in the process of identifying, analyzing and formulating solutions to various problems related to daily life in the organization (Subbulakshmi, Nagarajan, Felix, 2014, p. 25).
- ❑ And JUSE defines a quality Circle as a small group of workers in the front lines of production, who work continuously to adjust operations and improve the quality of products and workplace, and they work independently, and benefit from the concepts of quality control and its tools and techniques (Fukui, Honda, Inoue, Kaneko, Miyauchi, Soriano, Yagi, 2003, p. 6).
- ❑ The researcher defined quality Circles as small cooperative homogeneous groups that belong to its work and perform continuously in consistence with the requirements of the comprehensive quality management, benefiting from its tools and technologies for the implementation of preventive measures and corrective actions proposed which ensure the achievement of the organizations objectives that are related to quality and improving it.

Note from the previous definitions that quality Circles, regardless of researchers' disagreements, the variation of definitions and areas where they are applied, share specific characteristics that can be summarized as follows:

- ❑ A small group of workers;
- ❑ Work cooperatively and continuously;
- ❑ Use tools of quality control in its work.
- ❑ Part of the method of quality control in organizations;
- ❑ Its members are part of the administrative reorganization of the Organization, but they work independently;

- ❑ Its members perform similar work from the same workplace;
- ❑ Voluntary membership;
- ❑ Meetings are organized;
- ❑ Leadership and supervisors directing their work;
- ❑ Their members are trained to use the methods of problem identification and solving using the techniques and tools of quality control;
- ❑ Their proposals are not obligatory for the higher administration because they need its approval to become implementable, and they follow up on the implementation of the proposals if approved;
- ❑ Quality Circles improve the quality of outputs; enrich practical and personal life of workers; improve work environment and adjust and control the quality of operations.

6.2. The requirements for the implementation of quality Circles

The implementation of quality Circles is a systematic process in the organization, as being a part of the method of quality control, thus they need the requirements and conditions to be applied and work actively, in which all the objectives and the expected benefits and the benefits resulting from the safety of the implementation are achieved.

The researcher has compiled these requirements in main axes that include several items which are considered the summary of what the researchers mentioned about the requirements.

I. The Higher Administration

The successful implementation of quality Circles depends largely on the extent of maturity the higher administration has and its willingness to apply this approach, and the extent of its commitment and support to its procedures and work results (Kalirawna, Attri, Dev, 2015, p. 616).

The most prominent aspect of the higher administration's support of the approach of quality Circles is illustrated by the following:

- A. The higher administration's awareness of the approach adopted in quality Circles.
- B. The approval of the quality Circles' activities, explaining clearly the purpose of the use and the objectives to be achieved.
- C. Advice and support and training requirements.
- D. Strategic planning to predict the training needs and ways to encourage and follow-up.
- E. Giving the members of quality Circles trust in the continuous support of the higher administration to their work programs and activities.
- F. Providing the members participating in the Circles with opportunities to participate with their opinions and suggestions, through the periodic meetings of the Organization.
- G. The commitment to the proposals and recommendations offered by the quality Circles on the improvements and steps to be implemented.
- H. The lack of urgency to obtain the results of the implementation of the quality Circles activities.
- I. The allocation of incentive awards for the members of quality Circles, in appreciation of and encouragement for their work and activity.
- J. Providing union and labor support.

II. Workers

Workers are considered the main class targeted by quality Circles, and the main pillar in the implementation and organization of its activities and work programs, as by their efforts, the organization evolves, and through their suggestions and work, working procedures and the quality of the products improve. Therefore, they are responsible for a set of main requirements in the implementation of quality Circles.

The requirements for the implementation of quality Circles that are specifically related to workers and they are as follows:

- A. The voluntary participation in quality Circles.

B. The increase of awareness about quality concepts, tools and technologies and their use in a way that achieves the goal of their activities.

C. The commitment to training programs.

D. The development of personal and analytical skills and capabilities of problem solving and addressing systematically.

E. The continuity of the participation quality Circles activities orderly.

F. The commitment of dates of the meeting of quality Circles.

G. The existence of contacts and good relations between members of quality Circles.

H. Participating with their opinions, suggestions and inventions, and sharing their ideas and creativity on the problems and the possible ways to address them.

I. Work cooperatively.

J. Informing the supervisors or higher administration about the work that has been done and the improvements that have been agreed upon and their implementation.

III. The organizational culture

The implementation of quality Circles as one of the tools of total quality management (TQM) depends primarily on the creation of an organizational culture that is consistent with the overall values prevailing with total quality management, the existence of an organizational culture consistent with a culture of quality is a fundamental pillar for the success of the organization.

(Kalirawna, Attri, Dev, 2015), (Chaudhary, Yadav, 2012) mention a set of requirements for the implementation of quality Circles that exist within the framework of the organizational culture and they are as follows:

A. The adoption of the quality concepts and quality management in the objectives and mission of the company.

B. The existence of a culture that supports quality and its methods, tools and techniques.

C. The provision of proper leadership.

D. The clarity of the duties, responsibilities and roles.

E. The existence and serious following of rules and procedures related to security and safety to ensure prevention opportunities.

F. Working to achieve job satisfaction, and ensuring the participation and enabling of workers.

G. Promote liaison horizontally and vertically.

H. Educating workers and enlightening them about future plans and how to achieve the desired goals.

I. The development of the work team concept and the group work within the framework of the concepts of quality and its methods and tools.

J. Enlightening workers about work-related changes and enabling them to work efficiently.

K. Rewarding workers who develop their work, or propose development suggestions.

L. Providing favorable work atmosphere for quality Circles activities and meetings, and providing the support and the requirements of its work.

M. Work systematically.

N. Focus on the results of the work.

O. The ongoing evaluation of the results obtained and the efficiency of the work.

IV. Training

Training is an essential pillar in the implementation of quality Circles, and the deployment of their concept, and the development of workers skills and their operational, intellectual and cultural abilities. Therefore, the organization must plan for it accurately and direct the higher administration to provide what is necessary for it and take care of it. Workers must commit to its methods and benefit from it in the developing of their experience and enhancing their potential, which ensures the achievement of full benefit in quality Circles activities and meetings.

(Kalirawna, Attri, Dev, 2015), (Chaudhary, Yadav, 2012) mention the contents of the training as a prerequisite for the implementation of quality Circles, and they are as follows:

A. Planning for the training activities and providing what is necessary for it, such as a suitable place for meetings, time, presentation and education tools and techniques, financial support, the trainees and the leaders of the training operations.

B. The obligation to attend training meetings.

C. Educating workers about the concepts of quality and quality management and their tools and methods.

D. Training workers on the tools and techniques of quality and how to use them in solving problems.

E. Improving communication skills and scientific thinking for the trainees.

The requirements presented show that quality Circles operate within the organizational framework of the organization, and they need to be supported and adopted, and they also show that quality Circles are concerned with the empowerment and training of workers and they need to be provided with requirements related to workplace and methods.

In the researcher's opinion, the provision of such requirements is a strong pillar in the building of quality Circles and the implementation of their work effectively, which can lead to achieve the desired goals and benefits.

7. Case Study

☐ The Research Society, its sample, and Borders

☐ Research Population, sample, and Limitations

The Research Society in the Syrian communications Company.

The search sample is represented by all the workers of the same first and second functional categories in the Syrian Communications Company, and they are 13010 workers.

The method of random sampling technique of class has been used with a number of items of 150 items.

7.1. The limits of research

☐ Place-related limits: the research was limited to the Syrian Communications Company.

☐ Time-related limits: the search was limited to the period between 2016-2017.

☐ Scientific limits: the research was limited to the availability of the requirements for the implementation of quality Circles in Syrian Communications Company (organizational culture, training, awareness and understanding of the higher administration, and the response and support of the higher administration).

7.2. The method and requirements of research implementation

The method of research implementation is represented in the following ways:

☐ Survey in Syrian Communications Company about the reality of the laws, methods and ways used to improve quality, based on direct observation and unguided interview (Free and Non-codified) with the sample search.

☐ The theoretical side of the research is studied through the descriptive approach – Case Study – for the independent and subsidiary variables aforementioned in the scientific limits of the research.

And this study is done based on what is mentioned in the most important and latest books, references and Arabic and Foreign scientific studies which are related to the subject matter and the main problem of the research, in addition to what was mentioned in specialized electronic sites.

☐ The practical side is studied through the use of direct observation and in-depth interview.

Test of the research hypotheses with an analytical and statistical style, through the design of questionnaires, distributing

and collecting them, unloading their statements and processing and analyzing them in order to reach substantive, realistic and scientific conclusions.

7.3. The statistical methods and techniques used to summarize and analyze data

The statistical package of Social Sciences (SPSS) program has been used for various statistical analyses, whereas the statistical methods used for the purpose of answering the study questions and testing the propositions according to the nature of each were as follows:

1. The Cronbach's Alpha test has been used to identify the extent to which the stability of the questionnaire and its items.
2. The Kolmogorov-Smirnov Test (Kolmogorov-Smirnov Z) has been used to test the extent to which the data follows natural distribution.
3. The weighted average and the standard deviation have been used to report the direction about the availability of the requirements of the implementation of quality Circles in Syrian Communications Company.
4. One Sample T-Test has been used to test the research hypotheses.

7.4. The Questionnaire

This questionnaire was prepared as a tool for study, according to (4) axes, which are the organizational culture, training, the higher administration's awareness and understanding of the concept of quality Circles and the higher administration's response and support for the implementation of quality Circles. Each axis contains a number of closed direct and indirect questions which are related to the subject of the questionnaire and the objectives of the study.

The researcher used the Cronbach's Alpha reliability coefficient to measure the stability of the questionnaire, where it was worth 0.965.

7.4.1. The Kolmogorov-Smirnov Z Test

Table 1 shows Kolmogorov-Smirnov Test Z and it is noted that the value of the moral level for the questionnaire are all bigger than 0.05 which is adopted in the study, and this shows that the data follow the Normal distribution.

Table 1. The natural distribution Test of the questionnaire
Traction axes: One-Sample Kolmogorov-Smirnov Test

The Axle	The number of paragraphs	Arithmetic	The standard deviation	Kolmogorov-Smirnov Test Z	The moral level
The first	15	3.18	0.674	0.785	0.568
The second	5	3.16	0.756	1.272	0.079
The third	6	3.17	0.794	1.230	0.097
The fourth	8	3.39	0.750	At 1.314	0.063
All axes	34	3.23	0.653	0.654	0.786

Source: Prepared by the researcher based on the output of the SPSS Program.

7.4.2. The analysis of the study

The standard deviation and weighted average have been used for the answers of the sample research to the items of the questionnaire in order to know the views of and trends of the sample research toward the study axes, and the Likert quintuple Scale has been used to assess the answers as illustrated in table 2.

Table 2. Likert quintuple Scale

Level	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The weighted average	1.0- 1.79	1.80 - 2.59	2.60 - 3.39	3.40 - 4.19	4.20-5

7.4.3. The analysis of the first axis (the organizational culture)

Table 3 shows the Trends of the individuals in the research sample toward all the items of the first axis (the organizational culture), and it is noted that the organizational culture of the company is compatible with the culture of quality by medium; the researcher attributes that with the fact that the company has an organizational culture and it can be considered theoretical without real values in application, and that is assured by the company's adoption of quality as its slogan and the belief that it can be achieved through the prevention of errors and shortcomings. However, the company does not follow scientific methods and statistical techniques in tackling those problems and the use of some of these tools and technologies remains limited to a certain category of workers in the company which are often from the status of work such as: Director and Head of Department,. In addition, it lays plans and strategies and establishes projects to improve quality, but it does not circulate these things according to a comprehensive directory for the workers in the company.

It was also noted that most of the workers in the company of various levels do not have full knowledge of the organizational structure of the company, and they have no knowledge of all criteria for the assessment of their work and their contribution to the improvement of quality or production. A medium level of the evaluation for quality-improvement projects was also noted, and that, for the researcher, is mainly the responsibility of the higher administration.

The medium value of the volunteerism culture in the company has been noted. The researcher attributes that to the lack of real encouragement and stimulation from the higher administration that meet the expectations of the workers, and to the lack of interest in feedback on their part. However, in spite of that, there is cohesion and a strong correlation between the various categories of workers, especially in the same status of work or the same scientific qualification. It was also noted that there was decline in that to average progressively when the contacts are from the higher administration level to employees, and perhaps this is normal due to the fact that the Syrian Communications Company is a public company that operates in accordance with the administrative decision and the authority it gives to the higher administration which is a set of orders for various working groups.

The medium value of the presence of the work teams was also noted, those teams work to improve quality or any form of teamwork. The researcher attributes that to the fact that the company largely adopts external consultants, analysts and executors to study and implement and evaluate projects to improve quality and other projects. The researcher also attributes that with the company's use of supervision committees made up of two specialists whose job is related to the studied and executed project.

7.4.4. Analysis of the second axis (training)

Table 4 shows the research sample trends about all the items of the second axis (training), and it was noted that the level of training used in the company suits by medium the level of training required for the implementation of quality Circles or any of the tools, techniques and methods of total quality management, and despite the presence of planning for training and material support for training and its activities and requirements, yet it shows clearly that the quality of the training received by workers on the management of the overall quality and its tools and technologies is of an average level and often tends to get lower.

QUALITY MANAGEMENT

Table 3. The sample research individuals' trends towards the items of the first axis (organizational culture)

Item	Gauge	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	The weighted average	The standard deviation	Evaluation	The Arrangement
1	Redundancy	14	64	11	15	5	3.61	1.027	Ok	1
	Percentage	12.8	58.7	10.1	13.8	4.6				
2	Redundancy	9	63	20	11	6	3.53	.9770	Ok	3
	Percentage	8.3	57.8	18.3	10.1	5.5				
3	Redundancy	5	37	42	19	6	3.15	.9510	Neutral	7
	Percentage	4.6	33.9	38.5	17.4	5.5				
4	Redundancy	6	54	23	24	2	3.35	.9460	Neutral	4
	Percentage	5.5	49.5	21.1	22.0	1.8				
5	Redundancy	2	38	36	27	6	3.03	.9470	Neutral	12
	Percentage	1.8	34.9	33.0	24.8	5.5				
6	Redundancy	5	34	36	31	3	3.06	.9460	Neutral	9
	Percentage	4.6	31.2	33.0	28.4	2.8				
7	Redundancy	2	36	42	25	4	3.06	.8850	Neutral	10
	Percentage	1.8	33.0	38.5	22.9	3.7				
8	Redundancy	4	31	42	24	8	2.99	.9770	Neutral	13
	Percentage	3.7	28.4	38.5	22.0	7.3				
9	Redundancy	10	30	28	36	5	3.04	1.079	Neutral	11
	Percentage	9.2	27.5	25.7	33.0	4.6				
10	Redundancy	10	46	22	26	5	3.28	1.070	Neutral	5
	Percentage	9.2	42.2	20.2	23.9	4.6				
11	Redundancy	13	57	25	12	2	3.61	.9020	Ok	2
	Percentage	11.9	52.3	22.9	11.0	1.8				
12	Redundancy	9	32	34	25	9	3.06	1.091	Neutral	8
	Percentage	8.3	29.4	31.2	22.9	8.3				
13	Redundancy	6	39	35	25	4	3.17	.9670	Neutral	6
	Percentage	5.5	35.8	32.1	22.9	3.7				
14	Redundancy	6	32	33	28	10	2.96	1.071	Neutral	14
	Percentage	5.5	29.4	30.3	25.7	9.2				
15	Redundancy	3	22	48	31	5	2.88	.8790	Neutral	15
	Percentage	2.8	20.2	44.0	28.4	4.6				
As a result of the axle	Redundancy	104	615	477	359	80	3.18	.6740	Neutral	
	Percentage	6.3	37.6	29.2	22.0	4.9				

Source: Prepared by the researcher based on the output of the SPSS Program.

During his meeting with members of the research sample, the researcher has noted that most workers do not know what the tools and techniques of quality management are except a specific category which is the class status such as the director and some of the category of the class status such as the head of department.

He also noted during his presence in the company and meeting the research sample that the training given to workers does not largely improve communication skills and scientific thinking, as it is still of an average level. The researcher attributes that to the possibility of the lack of real follow-up of the training results. He also noted the variety of training courses for workers held in the company, the moderation in the number of trainees, the interest in the theoretical content of the training courses in addition to the medium interest in the actual implementation or use of this training content in the practical implementation of the company's projects and businesses, and finally considering the course as an added value to the knowledge possessed by the trainees.

7.4.5. Analysis of the third axis (the higher administration's awareness and understanding of the concept of quality Circles)

Table 5 shows the research sample trends towards all the items of the third axis (the awareness and understanding of the higher administration of the concept of quality Circles). It is

noted that this awareness and recognition is of a medium value. The researcher attributes that with the company's higher administration's faith in indulging workers in the improvement of quality in the company, and its interest in following a clear methodology for continuous improvement and collection of benefits gained from the implementation of the overall quality management's methods, tools and techniques, but workers do not share this concern and faith in the light of the medium values obtained as a result of encouragement or motivation or attention given to their opinions and suggestions which explains the views of staff from various occupational groups about the lack of attention on the higher administration's part in using and applying the tools and techniques of the overall quality management including quality Circles.

7.4.6. Analysis of the fourth axis (The response and support of the higher administration for the implementation of quality Circles)

Table 6 shows the research sample's trends towards all the items of the fourth axis (The response and support of the higher administration for the implementation of quality Circles). It was noted that the level of evaluation of this axis is average, despite the strong ability that the higher administration possesses to provide the necessary financial support and the ability to participate in its activities. However, in the researcher's opinion, that ability is decreased by the medium ability of the higher adminis-

QUALITY MANAGEMENT

Table 4. The research sample trends towards the items of the second axis (training)

The item	Gauge	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	The weighted average	The standard deviation	Evaluation	The Arrangement
16	Redundancy	14	68	19	6	2	3.79	0.806	Ok	1
	Percentage	12.8	62.4	17.4	5.5	1.8				
17	Redundancy	5	44	28	28	4	3.17	0.986	Neutral	2
	Percentage	4.6	40.4	25.7	25.7	3.7				
18	Redundancy	2	24	43	30	10	2.80	0.950	Neutral	5
	Percentage	1.8	22.0	39.4	27.5	9.2				
19	Redundancy	2	42	33	26	6	3.07	0.959	Neutral	3
	Percentage	1.8	38.5	30.3	23.9	5.5				
20	Redundancy	2	40	32	25	10	2.99	1.023	Neutral	4
	Percentage	1.8	36.7	29.4	22.9	9.2				
As a result of the axle	Redundancy	25	218	155	115	32	3.16	0.756	Neutral	
	Percentage	4.6	40.0	28.4	21.1	5.9				

Source: prepared by the researcher based on the output of the SPSS Program.

Table 5. Research sample trends towards the items of the third axis
(The awareness and understanding of the higher administration of the concept of quality Circles)

M	Gauge	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	The weighted average	The standard deviation	Evaluation	The Arrangement
21	Redundancy	5	43	41	13	7	3.24	0.952	Neutral	1
	Percentage	4.6	39.4	37.6	11.9	6.4				
22	Redundancy	6	34	47	17	5	3.17	0.921	Neutral	4
	Percentage	5.5	31.2	43.1	15.6	4.6				
23	Redundancy	2	39	51	13	4	3.20	0.814	Neutral	3
	Percentage	1.8	35.8	46.8	11.9	3.7				
24	Redundancy	2	38	43	20	6	3.09	0.908	Neutral	6
	Percentage	1.8	34.9	39.4	18.3	5.5				
25	Redundancy	5	39	43	18	4	3.21	0.903	Neutral	2
	Percentage	4.6	35.8	39.4	16.5	3.7				
26	Redundancy	4	35	43	23	4	3.11	0.906	Neutral	5
	Percentage	3.7	32.1	39.4	21.1	3.7				
As a result of the axle	Redundancy	24	228	268	104	30	3.17	0.794	Neutral	
	Percentage	3.6	34.9	41.0%	15.9	4.6				

Source: prepared by the researcher based on the output of the SPSS program.

Table 6. The sample research trends towards the items of the fourth axis
(The response and support of the higher administration for the implementation of quality Circles)

M	Gauge	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	The weighted average	The standard deviation	Evaluation	The Arrangement
27	Redundancy	5	50	35	16	3	3.35	0.886	Neutral	6
	Percentage	4.6	45.9	32.1	14.7	2.8				
28	Redundancy	5	41	41	17	5	3.22	0.927	Neutral	8
	Percentage	4.6	37.6	37.6	15.6	4.6				
29	Redundancy	5	49	35	17	3	3.33	0.893	Neutral	7
	Percentage	4.6	45.0	32.1	15.6	2.8				
30	Redundancy	5	53	34	14	3	3.39	0.872	Neutral	5
	Percentage	4.6	48.6	31.2	12.8	2.8				
31	Redundancy	8	49	37	13	2	3.44	0.865	Ok	3
	Percentage	7.3	45.0	33.9	11.9	1.8				
32	Redundancy	4	59	31	12	3	3.45	0.844	Ok	2
	Percentage	3.7	54.1	28.4	11.0	2.8				
33	Redundancy	10	58	25	12	4	3.53	0.939	Ok	1
	Percentage	9.2	53.2	22.9	11.0	3.7				
34	Redundancy	5	53	36	12	3	3.41	0.852	Ok	4
	Percentage	4.6	48.6	33.0	11.0	2.8				
As a result of the axle	Redundancy	47	412	274	113	26	3.39	0.750	Neutral	
	Percentage	5.4	47.2	31.4	13.0	3.0				

Source: prepared by the researcher based on the output of the SPSS program.

tration in the company to support quality control and improvement programs, and its medium ability in response to proposals for improvement submitted to it, in addition to the medium ability in the dissemination of the concept of quality improvement and the provision of requirements for quality improvement programs and techniques including quality Circles.

7.4.7. Hypotheses Testing

Table 7 shows the results for hypotheses testing, as follows:

- 1) The refusal of the alternative hypothesis that states, "There is an organizational culture that supports the implementation of quality Circles in Syrian communications Company".
- 2) The refusal of the alternative hypothesis that states, "The higher administration has awareness and understanding for the concept of quality Circles in the Syrian Communications Company."
- 3) The refusal of the alternative hypothesis that states, "The to higher administration in the Syrian Communications Company is responsive and supportive of the implementation of quality Circles."
- 4) The refusal of the alternative hypothesis that states, "there is a level of appropriate training for the implementation of quality Circles in Syrian Communications Company".

7.5. Search Results

The researcher reached a set of results about the Syrian Communications Company:

1. The company is concerned with improving the quality of its products. It adopts quality as its slogan as well as its products. In addition, the company believes that quality is achieved through the prevention of errors and shortcomings.
2. The higher administration has medium concern in spreading the culture of quality.

3. There is a medium level of encouragement and motivation for workers.
4. There is a medium level of assessment for the quality of products and quality improvement projects held at the company.
5. There is a strong correlation and connection between workers of the same functional levels or scientific qualifications.
6. The company has great financial potential and it is considered to be sufficient for the implementation of quality Circles.
7. Workers are interested in the implementation of quality Circles, as administrative and artistic methods, as they consider them to be suitable with their vision of financial and moral reality improvement.
8. Workers have a medium level of voluntary work culture.
9. The use of tools and techniques for managing the overall quality in the company is of a medium level.
10. The use of work teams in the company is of a medium level.
11. The attention to the views of workers and their proposals is of a medium level.
12. Training on the concepts of quality, quality management, quality management system and total quality management is of a medium level.
13. Follow-up to the process of training and results is of a medium level.
14. The interest in following a clear methodology for continuous improvement is of a medium level.
15. The higher administration's interest in the implementation of quality Circles is of a medium level.
16. Organizational culture and training are of medium levels.

7.6. Conclusions and Recommendations

There is no sufficient level of requirements for the building and implementation of quality Circles. Thus, the implementation of quality Circles in Syrian Communications Company is not possible.

Table 7. The results of the hypotheses Testing

Hypothesis	SMA	Standard deviation	Null hypothesis H0	Alternative hypothesis H1	The value of T tabular	The value of T calculated	Degree of freedom	Level of significance	The result
1	3.18	.674	$3.40 > \mu$	$3.40 \leq \mu$	1.645+	-3.382	108	0.001	Rejection of the alternative hypothesis.
2	3.16	0.756				-3.268	108	0.001	Rejection of the alternative hypothesis.
3	3.17	.794				-3.008	108	0.003	Rejection of the alternative hypothesis.
4	3.39	0.750				-0.125	108	0.901	Rejection of the alternative hypothesis.

Q-as

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