

Quality Circles: what do they mean and how to implement them?

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DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v3-i12/430>

Published Date: 22 December 2013

Abstract

Almost all of the companies face problems which today are very different from problems in a past this also mean that the way of solving problems today is very different from those in a past. As one of most effective way of solving problems today is through using of employees in solving problems of enterprises. Quality circles present the best way of incorporating the employees in a search for the best solution for the problems in enterprise. The usage of quality circles in the last 10 years is in a growth, after the great result that they showed after mass usage of quality circles in enterprises. In this research paper we analyse quality circles and we give additional arguments for advantages and reason of more effective usage of quality circles and also comparing the usage of quality circles in different countries.

Keywords: TQM, Function of Quality Circles, Employees

The common thing for all companies, from the day they were founded and up to now, is dealing continuously with the problems. In the past, the problems have been resolved by the head of the management. This practice has been used for a longer period of time, even though this type of decision-making was not quite the best, it has still brought positive results. Today, companies that face strong competition differ only in nuances, which can further be of crucial importance for the existence of the company. Problems faced by companies today cannot be solved so easily and quickly. These problems have to be

analyzed in details, and take in consideration all possible ways for solving them. In this case, in order to solve the problems, different statistics and mathematics techniques and methods have been used.

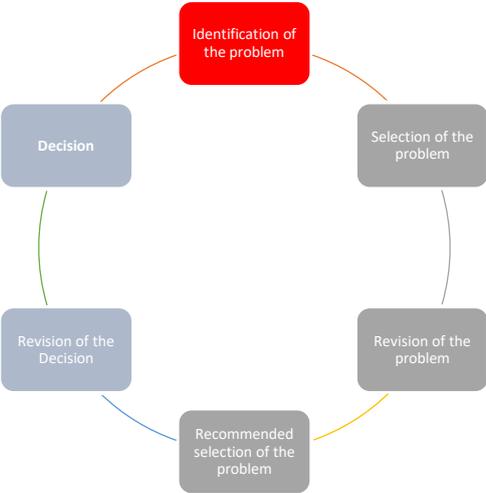
W.E Deming is the first author, who emphasizes that the classic action, where only the managers can solve the problems, is wrong. He proposes another way of operation, respectively a qualitative analysis of problems, called Quality Circles. Even though this idea was initially derived from W.E. Deming, the largest contribution to further development and adaptation of Quality Circles has been given by Kaori Ishikawa. Quality Circles have been used previously in Japan, which have experienced a significant growth. According JUSE (Japan Union of scientist and engendering), in 1962 there were only 20 Quality Circles with 400 members, while in 1968 16,000 circles with 200,000 members, and in 1978 this number reached 88,000 circles with over 700,000 members. According to some estimates, nowadays, the number of participants in the registered or unregistered Quality Circles is around eight million employees.

Having in consideration the facts mentioned above, it is obvious that this is a real boom in the implementation of Quality Circles. Based on the analysis, the logical conclusion would be that Quality Circles have been very successful, but it was also necessary to require concrete data and possible benefits from the implementation of Quality Circles.

The Statistical data were surprising only for a period of 16 years, Japanese companies achieved to save over \$ 50 billion, while the new data are pointing savings of five billion dollars a year.

In America, by conducting the Quality Circles, it has been achieved a save of 10 to 15 billion dollars annually. Cost / benefit analysis show that the ratio of return on assets invested in Quality Circles is from 2:1 to 14:1. Just as a comparison, during the same period, where Japanese companies implement Quality Circles, managed to increase their output to 9% for one hour, for employees, while on the other side , the US companies only 3%.

Figure 1.1 – The Function of Quality Circles



- Management



- Members of the Circles



- Management and members of the

Circles

Source: L.Drakulevski, Leadership – the basis for effective strategic management, Faculty of Economics, Skopje, 1999 , f. 205.

Quality Circle represent a group consisted of internal members, which consists 3 to 15 members. Statistics, previously analyzed, emphasize that the Circles are more often consisted of eight members. In most of cases, the members of the Circle perform the same activities, and voluntarily participate in the Circle.

The members of the Circle are the employees who can have influence in problem solving or to those members affected by the problems. They often meet once a week, meetings that approximately last an hour. During the meetings, the members of the Circle analyze the problems in details. After the frequent meetings, the members of Quality Circles propose the solutions of the problems that are closely related to their daily activities. In order to come up with the best problem solutions, the members have to attend the induction trainings by using the newest methods and techniques. Quality Circles are led by the Supervisors or the leader elected by the members of the Circles.

Quality Circles are established by the management leadership, where beside the internal members, also a member from another department outside the Circle has been elected, whose task is to observe the way the Circle has been led. Once the proposal has been selected by the members, the managers should give maximum support to the implementation of the decision taken. In case of failure to apply the solutions offered by the employees, then they will have no motivation to work further, because the company will not respect their opinions or them. All this, reduces the motivation of the employees, and contribute in continuation of the existing mistakes and even increase them.

The successful operations of Quality Circles are directly related to the functioning of participative management. If management operates in an autocratic way, then it will disable the proper function of Quality Circles, as Robert Cole, professor at the University of Michigan, says: "You cannot leave the Quality Circles in a hostile environment, and still expect great results from them".

The implementation of Quality Circles is not easy. Problems derived from using the Quality Circles, in most cases, are caused by the managers who perceive threats to their positions. But the facts indicate the contrary, as the purpose of the Circles is not to jeopardize the position of managers, but, rather, by gaining better results, they strengthen their position.

Quality Circles can be used for different purposes. According to American Society for Quality Control, in the book QC Circles: Application, Tools and Theory, the most used goals in majority cases are:

- ✓ Quality
- ✓ Efficiency
- ✓ Costs
- ✓ Equipment

Table 1.1- The goals of Quality Circles

Areas of interest	The percentage of activities
Quality	22 %
Efficiency	12%
Costs	11%
Equipment	10%
Moral	10%
The process of control	9%
Lost work	8%
Safety	4%
Learning	3%
Others	11%

Source: Gregerman, B Ira: "Introduction to quality cribs, an approach participative problem-solving," *Industrial management solicit*, Vol. 21, Issue 5, 1979, p.22

According to Professor Bobek Shuklevit, Quality Circle represents a technique, according to which, a group of employees regularly meet in order to identify and resolve the problems that affect the scope of their work.

According to professor Robert Amsden from Wrighte State University, Quality Circles are small groups of employees, with same scope, who regularly and voluntary deal with identification, solution and implementation of the decisions to solve problems that are related to their work.

According to William Mohr, Quality Circles can be defined in several ways, like:

- ✓ Form of Participatory Management
- ✓ A technique for the development of Human Resources.
- ✓ A Forum for solving the problems.

Form of Participatory Management – Quality Circles are the best tools which enable the implementation of participative management. If the employees have the opportunity to solve the problems by themselves, further implementation of these solutions contribute to the strategies of the companies, in order to set the goals in the position from bottom to top. This way of establishing the goals of the company provides the win-win situation. In this case, in one hand , the company wins, because employees who are in a direct contact with problems can find original solutions and can be motivated for their implementation, while, on the other hand, employees increase their feeling that they are respected and are part of the company, which means ,their word is respected. The companies, that want to implement participatory management, have to use Quality Circles.

The benefits of Quality Circles as a form of participative management are:

- ❖ The benefit of high level of perfection and efficiency, by increasing the awareness of the quality in the organization
- ❖ The use of human potential of the company by offering to employees greater and more interesting challenges by providing different tasks, which allow them to express their potential and creative talent.
- ❖ Develop positive feelings within the working environment, and a sense of belonging to a society;
- ❖ To convince employees to be identified with the company, the products and its goals;
- ❖ Motivate employees to increase their power and responsibility in the decision-making process, and their authority to make changes;
- ❖ Improving communication within and between different levels in the organization;
- ❖ Ensure greater transparency for the feedback of employees;
- ❖ Opening the organization for new ideas of employees.
- ❖ Building trust between employees in the organization.

A technique for the development of Human Resources – Involvement of the employees in solving problems, directly faced while carrying out their work, is very positive. They are quite well familiar with the problems and their solutions. Involvement of the employees will contribute in detecting on time the possible and impossible certain solutions. Another very positive thing is the motivation of employees in implementing the decisions already brought up by themselves.

In order to have effective Circles and achieve the synergy, it is necessary they function in a unique way and each of the members give own contribution in solving the problems. Within the Quality Circles, each member should be creative and present their ideas. In order to prevail such environment, it is necessary that management release the employees and do not manage the Circles, but members themselves manage independently the Quality Circles.

Another important dimension of Quality Circles, is also strengthening the sense of relevance of the employees, which are often lost while getting employed in a big company. In most of the cases, big companies do not pay attention to employees, so that they get the feeling of being unimportant and isolated. Quality Circles promote some aspects that can avoid such deficiencies, as such:

- General involvement
- Understanding and greater commitment to organizational goals
- Synergy
- Creativity
- Trainings to improve the skills and
- Meeting the needs for a united operation.

A Forum for solving the problems – The Forum is used to analyze the benefits of Quality Circles in problem-solving. As already mentioned, Quality Circles are consisted of employees who

deal directly with problems that require solutions. By involving the employees there will be realized two advantages:

- ❖ Those who perform the tasks, are mostly familiar with the problems and
- ❖ Making the propose-decisions by the employees.

As a Forum for solving the problems, Quality Circles can provide:

- ❖ Solve the problems in their areas;
- ❖ Improve the skills of the Quality Circles in problem-solving.
- ❖ A source for new ideas in the organization.

Quality Circles can be used for solving problems, even the problems facing the entire city. For example, Quality Circles have been used by the city of Dallas through a pilot program, which lasted three months. Excellent results have been achieved. The city of Dallas had reported 250 problems, by which, 175 of them had been closely related to each other. There were established 13 Quality Circles which managed to solve 23 problems. It is also important to emphasize that one Quality Circle can resolve three to four problems a year.

Below, we can see how Quality Circles operate in several countries.

India

Quality Circles in India, for the first time have been mentioned in 1980, and were applied in 1981, as a pilot program by Bharat Heavy Limited. The biggest problems of this company were:

- ❖ Multilingualism;
- ❖ Low level of education;
- ❖ Lack of feeling that the employees are part of the organization;
- ❖ Strong exchange associations, which fear for the decline of their power.

In the beginning , only five Quality Circles were established, which succeeded to eliminate within one year all the problems already emphasized. Further on, the number of circles were increased into 17, while in March 1983, this number was 202, with more than 1800 members. Having in consideration all these results, soon it was established the organization called Quality Circle Forum of India (QCFI).

Brazil

Quality Circles were first implemented in 1972, just a month after the company's quality managers Jonson and Jonson were introduced with the way of implementing the Quality Circles in Japan.

Ten years later, in Brazil 500 000 employees were included in the Quality Circles in more than 600 companies.

Norway

Norway has had the opportunity to get acquainted with Quality Circles by J.M. Juran, during the conference held in 1966 in Stockholm. But, thanks to the favourable situation with employment, which was almost completely in Norway, and with the highest salaries,

Norwegian companies were not interested in Quality Circles. Ten years later, they gradually started to implement the Quality Circles.

There are several advantages while implementing the Quality Circles, which have to do with the organization, the employees and the management. The advantages of the organization are the followings:

1. Improved and frequent communication, both within and at all organization levels;
2. Large flexibility of organizational structure;
3. Reduce conflicts and intolerance as cohesive lecture, interactive teamwork;
4. More human and motivational environment at work;
5. Greater use of the workforce with enhanced knowledge;
6. Greater engagement of employees in the organization and greater identification with the goals and their products;
7. Less delays and absences at work;
8. Increased productivity and quality at all levels;
9. Higher level of Safety among employees;
10. Saving money in time consume as a result of the Circles.

Advantages of the employees by applying the Quality Circles are the followings:

1. New professional and social skills;
2. Personal development;
3. Lower end stronger connection with the company.

The advantages of managing the implementation of the techniques of Quality Circles are closely related to the performance of more matured, more creative, more committed and more satisfied employees.

All previous studying on Quality Circles, show very positive results. According to the logic regarding the function of Circles, all employees should take in consideration to improve the quality, which is similar to the logic of TQM. The negative side of the Circles have to be applied minimum one year in order to get results, which is negative, especially for the businesses in Macedonia, which run continuously after the quick results.

Conclusions:

W.E Deming is the first author, who emphasized that the classical procedure where only the managers can solve the problems is wrong. He proposes a different way of operation, respectively, a qualitative analysis of problems, called Quality Circles. Quality Circles were first used in Japan, where have experienced a significant growth, and further dispersed to all enterprises in the world. According to the analysis already conducted, it can be concluded that the use of the Quality Circles was very successful. Cost / benefit analysis show that the ratio of return on assets invested in Quality Circles is from 2:1 to 14:1. Successful operation of Quality Circles is directly related to the function of participative management. Quality Circles represent a group consisted of internal members, which consists 3 to 15 members.

According to analysis, we can conclude that Quality Circles are usually consisted by 8 members.

Quality Circles can be analysed in several ways, such as:

- Form of Participatory Management
- A technique for the development of Human Resources.
- A Forum for solving the problems.

Quality Circles can be used for solving the problems encountered in a city, municipality, or any other institution.

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