Role Of Quality Circles In Optimising Productivity

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QUALITY CIRCLE has emerged as most innovative concept in the area of modern industrial management in the world. The concept of Quality Circles was propounded by Prof. Kaoru Ishikawa, Professor of Engineering at the Tokyo University, Tokyo, Japan. Prof. Ishikawa brought about a fusion of the theories of behavioural scientists like Herzberg and Mc Gregor with the Quality Control theories and techniques propounded by Dr. Jurah and Dr. Deming — two eminent American experts in SQC who came to Japan during post war reconstruction in 50s to lend their expertise. The fusion of these two theories has led to a system called Quality Circle and has considerably enlarged the scope besides Quality of the product. Quality Circle is defined as a small group of people doing similar work who meet voluntarily on a regular basis, usually under the leadership of their Supervisors, to identify and discuss their work related problems. The causes of the problems are analysed by mutual discussions and solutions are recommended to the management for their consideration.

PRODUCTIVITY AND QUALITY :

Productivity refers to the efficient use of resources–Men, Machines and Materials. The International Labour Organisation has summed up productivity as "a measure of the economy of means". This could be labour or machine productivity exclusively or total factor productivity. Productivity is greatly influenced also by product quality.

There is a way to improve productivity and hence optimising profit margin without hiring one new employee, adding another piece of equipment and is through better product quality. Quality, is giving the customer or the next person in the process—what is required, namely a product or service fit for use and doing this in such a way that each task is done right the first time.

QUALITY CIRCLE AS AN EXTENSION OF QUALITY CONTROL ACTIVITIES :

The emergence of Quality Circle in Japan is largely related to the history of Quality improvement in that country. It is well known that Japanese goods both prior to the World War II and immediately thereafter were considered cheap both in terms of quality and price. The aftermath of the war also witnessed a shattered Japanese economy. The emphasis at this time was, therefore, to rebuild the economy and gain a strong footing in the world market. The Union of Japanese Scientists and Engineers (JUSE) undertook the task of improving quality with an almost missionary zeal. Since most literature on Quality Control was imported from the U.S. the JUSE started intensifying Quality Control education and promotion adopted through Japanese language and methods and only advisory assistance from U.S. was sought. In this context Dr. Deming & Dr. Juran were invited from U.S. to train the Japanese in the use of Statistical Quality Control (SQC) techniques. Dr. Juran's, Total Quality Control (TQC) introduced a system whereby all people in the organization ranging from top management to operators were exposed to SQC. The years following were characterised by intensive emphasis on education and training in Quality Control on a continuous basis. In 1962 "QC for Foreman" a monthly publication was started by JUSE to pave the way for

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Quality Circle activities which led to the registration of the first QC.

The important point to be remembered is that Quality Control Circles (as they are called in Japan) were preceded by nationwide interest and enthusiasm for improvements in quality. As Juran observes "the QC circle concept emerged not as an isolated phenomenon but as a logical extension of a whole series of activities, all directed at improving organisational effectiveness through solution of problems in product quality. Quality Circles thus emerged as an extension of Quality Control activities through the use of small groups in the organisation's work areas. According to JUSE, the premier organization behind the interoduction and development of QC's, the following developments took place in Japan.

i) Initially Quality Control Circle concept envisaged the coverage of solving quality related problems alone. At a later stage the scope was expanded and QC's started incorporating other areas within their working including productivity, cost reduction wastage reduction, facility planning, safety etc.

ii) The QCs were initially formed to deal only with the problems of their work group. When problem selected is interdisciplinary or wide enough to involve more than one work area, joint QCs are formed.

iii) QCs were originally meant for introduction in production work area. Later the Circles expanded beyond manufacturing to offices, sales department, banks, hospitals, schools and even service organisations etc. Thus persons other than the shop floor workers started becoming members of QCs.

TODAY'S WORKERS ARE THE MEANS :

An organisation's most important asset are its workers. It is a resource that is rich and ready. Of all the organizations asset the human resource is the only asset that can appreciate in value–all others depreciate. An individual's contribution to quality and productivity depends upon combination of ability and motivation.

Today's workers, throughout the world, have a greater spectrum of knowledge than even before. Workers want to use their minds in their work. They will not accept the idea of being robotized for the sole purpose of burning calories to meet a product schedule is repulsive. Consequently if this is all that work has to offer, they will demand the highest possible wage for being kept in mental solitary confinement.

Workers achieve personal satisfaction and develop their fullest potential, when given the opportunity to be responsible and accountable, to achieve and to be recognized for what they have done. The overwhelming majority of workers believe that if they were more involved in making decision that affects their jobs, they would be more productive. They would like to communicate what they feel and believe, not only to the immediate supervisor but to top management. They would like to be brought together by management, in meetings and groups where information would be given to them so that they could feel that they are part of the business. They should be given adequate information, the opportunity to exchange ideas freely and assurance that their input will be used. Such participation increases employees added responsibility for performance resulting in quality improvement and productivity.

THE CHANGE PROCESS :

Today most employees want and feel that they deserve the opportunity to participate in decision making. A participatory ethics at work would, after all resolve one of the most glaring contradictions in contemporary life; the contradiction that exists between democratics right in society and autocratic rule in organization. The contradiction fosters an atmosphare in which a large number of managers and employees are adversaries.

Achieving maximum quality and productivity gains will require a change process that gradually involves more and more employees and managers in joint problem solving and decision making activities. A change process that will gradually create this environment in the Quality Circle process. It can be used in all types of organizations (private or public) and all types and sizes of business (manufacturing or service). It applies to all occupations (both blue and white collar workers) and works in both union and non-union governments.

The Quality Circle concept can be adopted to any culture, since its roots are fundamentally based on satisfying the psychological needs of human beings.

OBJECTIVES OF QUALITY CIRCLE :

In order to achieve success in the Quality Circle program presently with their broadened scope it is extremely important to lay down objectives or goals. There are a number of objectives that can be accomplished in the Quality Circle progress.

a) Self development through training.

b) Mutual development through interaction with co-workers.

c) Improvement in Quality through conscious efforts, training and better working.

d) Improvement in communication and attitude through group activities.

e) Waste reduction by cutting down waste in material, rework and time.

f) Job satisfaction through problem solving.

g) Improvement in productivity through reduced costs and eliminating rejection.

h) Improvement in safety through identification of hazards.

i) Linking all levels in the company through the QC structure.

j) Getting people involved in their job.

k) Reducing Absenteeism and grievances,

BENEFITS FOR THE ORGANISATION DERIVED THROUGH QC :

1. **A participative organisation** : The potential capacities of an organization's human resources are more fully utilized when employees are members of effective functioning work groups, such as Quality Circles that have high degree of group loyalty, effective skills of interaction and high performance goals.

2. **A Quality Conscious Organization** : With this degree of participation quality no longer resides in some small office in the manufacturing that is trying to inspect the product. Quality permeates the organization. It is a part of every job that is done. It is a responsibility that all employees assumes in relation to their own work; a responsibility to turnover perfect work to the next employee in the process.

3. **A Caring Organization** : Employees through participation in the Quality Circle process are developing favourable attitudes towards other employees, towards superiors, towards work, towards the organization and towards all aspects of their jobs. These favourable attitudes reflect a high level of mutual confidence and trust throughout the organization. Employees identify favourably with the organization and its objectives and deeply involved in achieving them.

Thus the Quality Circle program leads to a participative, quality conscious and caring organization resulting in higher productivity efficiencies.

QC IN INDIA :

The Quality Circle movement in India began in 1981 with the formation of Circles in BHEL. Since then interest in the practice has been growing. By the end of 1985 about 100 organizations were at various stages of development of QC.

QUALITY CIRCLE IN INDIAN PAPER INDUSTRY :

Though the number of Paper Mills propagating the QC movement in our country is not known the experience of J. K. Paper Mills, Jaykaypur, a unit of Straw Products Limited, the first Paper Mill in our country to introduce Quality Circles is worth mentioning.

After collection of relevant information regarding Quality Circle through participation in seminar on "QC–launching and institutionalising" as well as through observation of the circles functioning in BHEL Hyderabad, the concept was presented to the Senior Executives of the Mill during September '83. After the necessary exchange of views on the concept of Quality Circles, its philosophy and advantages with National Productivity Council and Quality Circle Forum of India when it was felt that the support required for founding and growth had been established the concept was presented to a few groups of staff and workmen in

December, 1983. Immediately there was a positive response from the Workmen/Staff and two groups came forward and formed circles in January 1984. The first to spearhead the movement was the circle in Stock Preparation department, closely followed by a circle in Electrical Maintenance.

The Circle members and the respective facilitators were trained in the concept, philosophy, role, responsibility as well as problem identification and problem solving techniques like brain storming, ABC analysis, Critical examination, cause effect relationship, cost benefit analysis and statistical analysis.

Today there are II Quality Circles operating in the Mills, 5 in production areas, 3 in Maintenance areas and 3 in Administrative areas like Stores, Accounts and Sales. The different problems solved by the circles include (a) Shade variation due to variation in alum dosing, (b) Paper Finishing Plant Cutter hoist cable snapping, (c) Congestion in Electrical Workshop, (d) Inconvenience in issue of Bearings due to wrong design of Bearing Almirah etc.

Although the prime objectives of Quality Circles is not financial benefit to the Company, still the saving out of some of the Quality Circle projects have been very substantial to the organization. In addition, many circle members have been found entering the Mill permises during their off hours to complete the data collection on the analysis, as they have not been finding time during their normal duty hours and the weekly time of one hour is inadequate. This proves their concern and sincerity to the work. Judging by the fact that the members do not expect or get any financial benefit, Quality Circle has brought about a welcome change in the attitude which will go a long way to improve productivity.

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