For the past two decades, Japanese management practices have attracted a lot of attention in the United States (Ouchi, 1981). QCs, in particular, have been considered as one of the most promising approaches to improving American workers' productivity (Ferris and Wagner, 1985). On the one hand, during the mid-1980s, it was estimated that over 90% of the Fortune 500 companies had QC programmes in their structures (Lawler and Mohrman, 1985) and over 200,000 American workers had been in QCs (Lawler, 1986). A recent survey of Fortune 1,000 has shown a small increase in adoptions of QC programmes from 1987 to 1990 (Lawler, 1992; Lawler, Mohrman and Ledford, 1992).

On the other hand, QC activity in chemical industries has declined significantly over the years in Japan (Cole and Tachiki, 1983). In the USA, QC programmes have failed in more than 60 per cent of the organizations in which they have been tried (Castorina and Wood, 1988; Marks, 1986). Thus, identifying the causes of QCs' failure seems to be an important task for researchers and practitioners.

Lawler and Mohrman (1985) have identified six developmental phases of QCs, the activities in each phase, and the threats to QCs at each stage. Low volunteer rate, resistance by staff groups and middle management, prohibitive costs, and savings not realized have been identified as some of the major reasons of QCs' failure.

QCs fell from grace as they were thought to be failing to live up to their expectations. A study in 1988 has found that 80% of a sample of large companies in the West that had introduced quality circles in the early 1980s had abandoned them before the end of the decade. Beckford (2002) quotes the example of a western retailer that took almost every wrong step, including:

- training only managers to run QCs, and not the staff in the retail outlets who were expected to participate in them;
- setting up QCs where managers appointed themselves as leaders and made their secretaries keep the minutes, thus, maintaining the existing hierarchy which QCs are supposed to break out of;
• expecting staff to attend meetings outside working hours and without pay;
• ignoring real problems raised by the staff (about, for example, the outlets’ opening hours) and focusing on trivia (e.g., are there enough ashtrays in the customer reception area).

**Impediments to the Effective Working of QCs**

The implementation of QCs, both in manufacturing and service sectors, have revealed that they have been operating quite successfully and most of their projects have been implemented. However, though the first reaction to formation of QCs had been a positive one, from management as well as workers point of view research studies conducted both by RBI and NIBM (NIBM) have revealed that as many as 75% of initially successful programmes were no longer in operation after the first few years. Why a movement which is beneficial for workers as well as the organisation, instead of spreading fast, should retreat in India is a growing concern for all. The reasons have to be thoroughly analysed before practical solutions can be evolved.

The declining trend of the QC concept is not limited to India alone but is also evident in the originating countries, Japan and USA, though the rate of decline in comparison may be quite low.

In Japan, where there are maximum number of QCs in operation, authorities on Japanese labour force like Cole have claimed that nearly 1/3rd of the QCs in Japanese companies are simply making nc contributions at all. Another such study conducted by Barlow and Dale have supported the above view and they have shown that more than 20 such circles which were in regular operation, have been officially disbanded in some particular organisations or have become moribund. The reasons again may be many and may vary from one company to another but it nevertheless goes to prove that even the Japanese have not been able to avoid the pitfall in making the operations of QCs a complete success. Lal (1994)

**Quality Management Through QCs**

Japanese have not been able to avoid the pitfalls in making the operations of QCs a complete success. According to Udpa (1992), in Japan, it is reported that only 40% of the organisations, having QCs, can claim to have 100% of QCs working
actively.

Many more documents, researches have also shown that not only in Japan but in the USA too failures are apparent. But whereas the Japanese have tried to overcome their difficulties and obstacles in the smooth operations of QCs by sheer perseverance and using a longer experience of more than 30 years, the USA and more so India, to a large extent, are a long way behind.

QCs in India today, both in the manufacturing and service sectors have shown a declining trend both in terms of quality and quantity. The momentum the QCs in India had gathered in the early eighties, far from accelerating, has shown a definite sign of decline in most of the units both in manufacturing and service sectors. However, it will be worthwhile to comment here that such a lukewarm response towards QC is more apparent in the service sector than in the manufacturing units.

In most of the banks, it has not spread to other branches as one would expect. Rather even ones, that had been given an initial push, have become dormant. The enthusiasm with which the QC movement had come to India in the early eighties had faded in the later half of the decade. It is difficult to pinpoint any particular factor as the reason behind this decline. In fact, many factors and much more combined together have led to this gradual slowing down process both in terms of enthusiasm and practice.

However, looking and taking into account the small number of years for which the QC concept has been in operation – little more than decades, one cannot justifiably brand a movement as a complete and total failure. QC in India is in its nascent and infancy stage, which needs nurture and care. It is quite natural for it to face teething problems, which are an integral part of the evolution process. It is only when the movement fully matures over time, one can justifiably and critically analyse its performance.

Nevertheless the reasons for the lukewarm response both from the management as well as the employees, have been briefly be discussed below.

(a) Total adoption of the Japanese package

The first and foremost cause of such a lukewarm response towards QCs, inspite of repeated endeavour on the part of leaders to keep it revived, is the complete adaptation of the Japanese package to the Indian conditions. Environment,
attitudes, literacy rate and size of units vary from one country to another. Hence it was immature to try to adopt the entire Japanese package, i.e., lift it totally from Japan and enforce it in the Indian situation. The Indian situation was not conducive to begin with, infra-structure was not adequate, and there was no proper scheme of training prior to the beginning of the QC movement. The seed, therefore, could not have its roots.

Japanese units are small family conglomerations with nearly zero per cent migration among workers. The concept of a LIFE TIME EMPLOYMENT prevails. Once they enter a unit, they become a part of the small family where it becomes easy to imbibe the traditions and adhere to the mechanisms for smooth functioning of the organisation. And, though in India, life-time employment is not new, in contrast to the Japanese smaller units there are much larger units with various departments, sections, spread far and wide, but controlled by a few at the top whose ideas may differ vis-à-vis the concept and promotion of QC. In many cases, the workers work for an unseen master.

(b) Implementation of QCs without implementation of Total Quality Management (TQM)

In Japan, TQM was implemented much earlier than quality control circle activities. The latter became a part of the former much later. For the Japanese, quality is defined as uniformly achieving the target and a continuing process and improvement towards perfection. The ultimate responsibility lies on all employees, who have to practically run the system, while managers have to improve on it. Before launching of a plan, it is conditional for employees to appreciate it and assure its quality.

In India, QCs started functioning much before implementation of TQM. The operations of TQM became the responsibility of an entirely new and separate department manned by statisticians and management experts. Employees viewed them as little better ones than surveying agents of an inspection department who were out to find fault with the finished products. The idea, that quality consciousness has to be the responsibility of each and every employee of the organisation, has not gained ground and TQM in India is still a far cry.
(c) Lack of management support

It is true that the success of any programme depends upon the support and guidance of top management. In the Indian socio-cultural milieu, the general trend has been that it is the elders with more experience, who reserve the right of decision making and the younger ones blindly follow those decisions. Managers, hence, tend to resist QCs because of the apprehension that their decision-making jurisdiction will be eroded. And though the decisions made by QC are only recommendatory in nature, the very fact that these fora offer collective suggestions which often become binding on the top management people. They perceive this as a threat to their decision-making authority. It is, thus, natural for them to consciously resist any workers' forum which is involved in decision making. This stands true for middle-level managers and supervisors also who feel that, with QCs identifying work-related problems, it is highlighting their inefficiencies and incapabilities only. Even where managers have accepted the concept of QCs, they have not fully understood its nature, purpose, and the philosophy behind it. As a result, the programmes have been started without really acquiring the adequate background, information and knowledge about the working of QCs. Too many people have jumped fast, either because of pressure from above or because of ‘demonstration effect’, playing the ‘game of numbers’. This has often resulted in misunderstandings, false allegations and unrealistic expectations from all sides. With only ‘lip service’ from the management, the programme may not grow at all. Transfer policies too have hampered the growth of QCs. With an uninformed known and disinterested manager, who is not tuned to the QC philosophy, the activities may become dormant with members also lying low.

(d) Lack of enthusiasm from employees and their rigid attitudes

Though an Indian worker is more literate today, dynamically more conscious, his/her profile is still low when compared to a Japanese or an American worker. The degree of commitment differs and mostly it is directly related to monetary benefits. An average employee often comes up with ‘what benefits does QC give us?’ They regard it as a management tool and refer to it as ‘management-sponsored scheme’ to get them to work and undercut costs. This leads to a constant fear that ‘if I’m cutting costs, I may be cutting myself right out of job’. It revives the sense of insecurity, particularly in private organisations and workers are hesitant to venture forward with
newer ideas. Such was the case that, in Texas, USA, a company had to give a written commitment that no retrenchment would follow cost reductions and that workers were free to actively participate in QC activities. Apart from this, no sooner a few projects are successfully implemented, a satiation point is reached among employees. The novelty wears off and what was once an exciting opportunity and challenge to them becomes just a routine chore. This generally is the result due to lack of orientation programme as may be the case in any field of activity be it teaching, desk work, operations, etc., where mundane routine/work generates boredom, resulting in lack of interest. Though such programmes may exist on paper, in practice, those are rarely followed for all cadres of employees.

(e) Apathetic attitude of trade unions

Trade unions apprehend QCs as encroachment to their union activities and regard it as unfair labour practice by the management. Worker members, who are found too active with QC activities, are critically viewed upon by union leaders and all efforts are geared to make QC programmes a failure. Most of the time, suspicions, intra-union rivalries, etc., foil all attempts to start QCs. Moreover, unlike in Japan and the USA, Indian trade unions for workers cover in their demands aspects, such as work designs, work standards and work methods. Often QC members hailing from different unions (they may not all necessarily belong to the same union) tend to voice their union views rather than their own individual views. This often results into QCs being more fissiparous fora rather than team-building bodies.

Even where union leaders themselves are leading QC groups, they inwardly nourish ideas of seeking promotions on the basis of their successful performance with QC projects. Where such promotions are not forthcoming, frustration sets in, leading to severe jolts and set back to QC programmes. Such attitudes reveal immaturity on the part of the Indian workers which further goes to prove that the socio-cultural milieu is still not matured enough to accept higher level needs - ego, social, self-esteem and self-actualization needs. More focus is still on lower level needs- psychological, and security needs which, it is largely believed, can be attained fruitfully through collective bargaining.
The very large size of an enterprise in India becomes a barrier to QC movement. There is lack of co-ordination, unfavourable attitude, and sense of apathy on the part of top officials as mentioned earlier as well as on the part of the fresh recruits. The large size of a unit, employing thousands of employees, is in contrast to the smaller units in Japan where more than 75% of the organisations employ a work force of less than 1,000. Due to large size the requirement of QCs, as groups of 5 or 6 members, becomes much more, leading to lack of co-ordination in their activities. A trend that has emerged, as an outcome of this, is to keep a majority of workers outside the purview of QCs. The very purpose of QC is, thus, defeated. It also leads to frustration among non-members who regard themselves as the unprivileged ones. There is suspicion, leading to non-functioning and collapse of QCs.

Even the practice of circulating the proceedings and recommendations or even, at times, inviting a few non-members to attend meetings, does not solve the problem and the feeling of bitterness develops and remains. The leaders are viewed upon as powerful agents of the management and rivalry sets in.

Some management experts have suggested a periodical change of membership by inducting new interested members. However, such a change would only lead to instability, would be time-consuming for the new entrants to learn everything from start, and, lastly, an ill-feeling would be created among those members, who have been asked to leave due to fault of theirs. Here again, the very objectives of QC that of self-esteem and self satisfaction would be denied.

There are some common problems not only confined to India alone but may also exist elsewhere, where QCs are in practice.

(i) Lack of training to QC members as well as top officials involved
(ii) Lack of planning and co-ordination when starting new projects

Training is a must for all QC members without which success of programmes may not be guaranteed. Juran (1980) emphasised this aspect in the Japanese operations. In India, training is regarded as a side issue and is taken care of only when there is no way out and that becomes absolutely necessary. Formal training by outside agencies becomes irrelevant and training is not necessarily linked to requirement. On-the-job
training is tedious and strenuous as senior officials consider it waste of their precious time, since they lack patience and are often over worked, thus, leaving the new recruits or members to fend for themselves.

Since there is no monetary reward associated with implementation of valid suggestions reducing costs, it becomes all the more important to have a sound planning procedure and a suggestion system. In Japan, a new system that has emerged is to award persons a part of savings realised from implementation of their accepted suggestions. Such an incentive may go a long way in making members active during brainstorming sessions. Another important limitation which has come to light is inadequate publicity of QCs' achievements. Often these go unnoticed or are under-rated by rival members. A planned programme for publicity in the form of weekly news letters, posters, circulars, etc., is missing leading to dissatisfaction among members who strive hard to achieve major benefits for their organisation.

 Unrealistic expectations of members, their eagerness to participate and accomplish without going into the intricacies of the problem also pose a threat to smooth functioning of QCs. Moreover, interference of an outside specialist leads to resentment, disinterest, distrust and a demoralizing effect on members.

(h) Non-application of simple techniques for problem solving
One of the major objectives of QCs, which is people-building, would be diluted if members are not encouraged to identify and resolve problems analytically with the help of specialists, if necessary. This is possible only when they make use of simple techniques which are taught to them during training. Moreover, following a rational methodology for arriving at solutions would lead to greater acceptability of the QC's recommendations on the part of the top management. Because of the low level of education of Indian workers, assistance and guidance have to be provided by the facilitator and other executives functioning in the area, while applying such techniques.

(i) QCs running out of problems
It may so happen that, after a period of time, QCs may feel that all the problems relating to the work-area have already been resolved and there is not much that they could possibly work on. According to Udpa (1992), in one such case, a QC which had been in existence for nearly three years faced this problem. But when, with the assistances of the facilitator, they had another session of brainstorming, they were able to unearth
many more problems to keep the QC busy again. Prevention of problems on the basis of past experience could also be the subject for brainstorming by QCs.

(j) Antagonism of non-members towards QC operations
Generally, there is no serious threat to the existence of QCs from the non-members provided precautions are taken. If no scope is given for anyone to misunderstand the earnestness of the management to give equal opportunities to all for participation in the QCs’ activities and if non-members are encouraged, from time to time, to see for themselves the achievements of the QCs, both tangible as well as intangible, non-members would progressively be attracted to join existing QCs or start new ones.

(k) No-maintenance QC records
If the QC does not maintain two registers to record notes of meetings and progress relating to solving problems, it would not develop the members’ self-confidence and would, thus, dilute the QC’s objective of development of individuals. This naturally would lead to the gradual decline in the level of QC activities.

(l) Language difficulty in communication
According to Sharma (1998), it is necessary that there should be no language barrier in the QC activities. It is necessary for every member to feel at home using any language that he/she is familiar with. Facilities for interpretation or translation into any commonly-understood language may be provided when any QC presents case studies in a language unfamiliar to the audience at any seminar, symposium/conference/convention.

(m) Communication gap between QCs and the departmental head
According to Udpa (1992), it is necessary for QCs’ members to realise that it is in their own and larger interest they should keep the departmental head and others informed about the activities of QCs preferably after each meeting. If the department head is taken for granted or ignored by the QCs, he/she may deliberately hamper the operation of QCs. It can be categorically stated that, just as QCs would improve managerial effectiveness, their failure or inactivity could also be attributed to some managerial deficiency and not to either the weakness of the concept or the members themselves. If the concerned officials keep their fingers on the pulse of the movement and take actions promptly to plug any lacunae or remedy any lapses, QCs would get reactivated.
Change of management

The top-person, with whose commitment the QCs were started may get transferred or may retire. The new incumbent in his/her place may not have the opportunity of understanding the concept in his earlier assignments or may not have the necessary faith in it. If these happen and no prompt remedial action is taken, then QCs may tend to gradually lose interest. Similar situations arise when even Facilitators and Coordinators change places. While the movement of the managerial personnel is inevitable in any organisation, there must be forewarning as to the likely problems and necessary action has to be taken to obviate these problems.

The only remedy for such problems is to ensure that the process of institutionalisation is perseveringly carried through so that the progress of the movement does not revolve around one or two individuals but becomes a part of the organisational culture.

Dean (1985) has pointed out that QC members ‘apparently have little patience for merely going through the motions—they want results’. The primary interest in becoming a member of a QC and attending QC meetings is probably due to ‘the circles’ potential for improving the work place’. One of the most frequently given reasons for failure to join a QC is the perception that QCs do not accomplish much (Dean, 1985). One factor related to this perception is the success or failure of previous programmes. Porter, Lawler and Hackman (1975) have suggested that participation can increase the accuracy of information related to work practices and environmental contingencies and the degree to which group members feel they own their work practices. Participation in work groups can lead to higher work effectiveness. Lawler and Mohrman (1985) have suggested that low volunteer rate is one of the destructive forces for QCs.

Lastly, there are limitations with regard to the areas of operations of QCs. Areas like increase in salaries, vacation time, overtime, bonus issues, etc., are outside the purview of QCs’ discussions. Moreover, they cannot work on other department problems unless invited to do so. Criticism of managers, supervisors or any other member is put down and not encouraged, whatever the reality may be. There is often a tendency for members to generally regard QC as a forum to air their own day-to-day grievances.

Juran (1967) has postulated that many companies fail to build necessary infrastructures first. This failure is blamed, in part, on insecurity. QCs, that have
started at companies' lowest levels, are often seen, even by first-level supervisors, as threats to authority. Although the QCs create excellent solutions to real problems, little support is given to implement these solutions. Management usually create barriers rather than providing active support structures.

Juran has also noted that, without active participation of top managers, these QCs often have limited knowledge of the problems facing the company. As a result, they instead focus on visible, but frequently trivial, problems in their immediate areas. The harder, cross-functional problems remained outside their scope of operations. These cross-functional problems are usually the 'vital few', which really affect bottom-line results, customers and critical quality characteristics. Inevitably, QCs quickly have gained a reputation for working on problems that really do not matter. In one company, these problems were called the 'third water cooler problems', referring to a QC that spent months installing an extra water cooler to reduce the extra steps taken by workers during a break.

Impact of QCs

According to Dey (1988), if QCs are formed with the right spirit and monitored carefully, those will have several positive impacts on the organisation. The potential of no other experiment in human resources development is, perhaps, greater than that of QCs. The impact of QCs may be both tangible and intangible.

The tangible impact includes better quality, productivity improvement, higher safety, greater cost effectiveness, better housekeeping, increased profitability, waste reduction and reduced absenteeism. These benefits can be measured in monetary terms and can be quantified. It is easy to impress the management by working on problems having tangible impact. Sharma (1998) mentions that it is very difficult to assess tangible impact as what is happening in an organisation is a cumulative impact of various plans, policies, incentives, motivation programmes developed by the management, perceptions, attitudes and enthusiasm of the employees. Until and unless management intentionally collect data for this purpose, it is not possible to know the calculable impact of QC.

The management is on the wrong track if its primary objective of launching QCs is to derive tangible benefits. Several factors having intangible benefits contribute a lot to
improved performance. The intangible impact means enriched quality of work life, attitudinal changes, harmony, mutual trust, better communication, effective team-working, better human relations, participative culture, human resource development, promotion of job knowledge, and greater sense of belonging. It is the presence of these factors that eventually makes an organisation dynamic and productive. The impact of some of these may not be felt immediately but their long term contribution is substantial.

The following are some of the case studies which will help to appreciate the impact of QCs.

**Cases relating to impact of QCs in Manufacturing Sector**

**Case 1: Tata Engineering and Locomotive Company Limited, Pune**

*Background*

Tata Engineering and Locomotive Company Limited (TELCO) is a commercial vehicle manufacturing in India. The Heat Treatment shop is a section of the Automobile Division involved in heat treating the components. Improvement of productivity and reduction in energy consumption are two of the most important activities of an industry. Keeping this in mind, a few employees from the middle-and-junior levels of management came forward to form QC. The QC is in operation since 1983 and QC number is SGA/PS/007.

*Problem*

In TELCO, Pune, the cost of energy consumption from various sources was rising. In view of high energy consumption in the Heat Treatment Shop, the QC decided to find ways and means of reducing it.

*Analysis, Solution and Implementation*

During the brainstorming sessions in the QC meetings, several ideas were discussed to reduce energy consumption. The Cause-and-Effect Diagram revealed the following:
More emphasis was given on the major energy-consuming furnaces. Time-bound action plan was prepared and a close follow up was done by the group for its implementation. There was a drastic reduction of turnaround time due to the fast implementation of new ideas.

**Benefits**

The consumption of energy was reduced from 4328 KWH/tonne in 1982-83 to 3231 KWH/tonne in 1983-84 and 2782 KWH/tonne in 1986-87, thereby, giving savings of Rs.29.7 lakh and Rs.68.6 lakh respectively.

**Source:** Dey (1988)

**Case 2: Tata Engineering and Locomotive Company Limited, Jamshedpur**

**Background**

The group was formed on August 2, 1984 in the Forge division. The QC was named Die Shop Improvement Group V and the Circle Registration Number is Forge/008/0144.

**Problem**

The QC members arrived at a consensus to take up the problem of house keeping and safety. A general lack of concern was observed in respect of the arrangement of non-moving material and scrap. This caused occasional accidents.

**Analysis and Solution**

The following steps were taken for the solution of the problem:

- a. Oil leakage was stopped with the help of maintenance.
- b. Machine guards were made and fixed in every machine.
c. Unused machines were sent to different locations of the company where these were being used.

d. Space was created for unwanted material and die storage.

e. Scrap Tab was made and regular removal of scrap was arranged.

f. Non-moving material was removed permanently.

g. Regular die cleaning system was introduced.

h. People were encouraged to use safety appliances.

i. Proper stacking system, movement slip and bin card system were introduced.

Benefits
The following quantifiable benefits were derived from the solution of the problem:

a. Rs.960000 earned from the clearance of 800 square feet for the extension of Die Shop.

b. Rs.800000 earned from the resale of 300 tonnes scrap F.A. beam dies.

c. Rs.248000 earned from the resale of 62 tonnes of scrap material.

d. Rs.225000 earned from the reuse of 10 tonnes of die steel.

e. Improved interpersonal relations and stronger sense of belongingness among the group members and use of their innovative capabilities for self-development.

Source: Dey (1988)

Case 3: Hindustan Machine Tools Limited, Hyderabad

Background
QC was formed in the Purchase (Machine tools Division) with 13 members and with Mr. J.S. Narasimham as the facilitator. The Circle number is 5.

Problem
Normal delays and duplication of work due to delay in filing system.

Analysis, Solution
The Ishikawa Cause-and-Effect Diagram was used to identify the various causes of the delays and duplication of work.

The following suggestions were made for the solution to the problem:
a. The practice was to punch all papers with correct spacing to ensure uniformity before filing. Three seconds were needed for correct spacing and another three seconds for punching holes.

The QC members suggested correct spacing and punching of stationery and other relevant papers. That would save a lot of man hours in punching work as large volume of papers was getting punched every day.

b. The existing flat files were required to be converted to the desired shapes by proper folding and pressing. This took a minimum of thirty seconds. The annual requirements of files for the Purchase Department was between three thousand and four thousand.

The suggestion was to receive the supply of flat files in the right fashion so that thirty-five seconds in folding and pressing could be saved for each file.

c. Filing work used to get piled up as a result of giving priority to urgent and important jobs.

The time that could be saved on account of proposed pre punching of all printed stationery and other relevant papers was available for this purpose.

d. Before and after despatch and on receipt of sanction, the same papers in the used to be filled at different places and times.

This could be avoided by fixing time limit and clubbing filing work.

**Benefits**
The savings resulted from the pre-punching of stationery and other relevant papers and folding of files were as follows:

a. Time saved on account of the suggested methods could be utilised for better purposes.

b. Filing of paper became fast and prompt.

c. Life of the existing punching machines increased as a result of reduction in the number of operations.

d. Uniformity in filing could be maintained.

e. The feeling of doing an unimportant job like punching could be eliminated.

f. Work area could be kept clean as spreading of paper pieces cut out of pinching was reduced.

g. Delay in further processing could be reduced.
h. Confusion due to improper or delayed filing of papers minimised.
i. Duplication of work and extra expenditure associated with it reduced.
j. Created a better impression about the functioning of the Department as a result of proper maintenance of files for prompt action.

Source: Dey (1988)

So far functioning of QCs in the manufacturing sector has been discussed, where success is apparent in the form of increased output and productivity. A general feeling exists that though QCs can be made operative in the manufacturing units, in the service sector, with diversified kinds of work force coupled with a unique nature of industrial relations, it is not possible to implement the same. But here also the positive experiences of the State Bank of India, Canara Bank, and Bank of Baroda have acted as eye-openers.

Case 1: Canara Bank, Royapuram Branch

Background

QC started functioning on 25th May 1987, with 7 members and was referred to as the ‘Roy’ circle. Weekly meetings are held.

Problems Identified

a. Untidy premises and delay in customer service due to improper sitting arrangement
b. Improper house-keeping
c. Lack of punctuality among staff members

Problem No. a: Untidy Premises

The reasons identified were:

1. Untidiness due to dirty floor, tables, dusty counters, inadequate fans, tube lights, bulbs, etc.
2. Parking of bicycles inside bank premises added to the discomfort of the customers who had to snake their way in through.
3. Improper seating arrangements of officers and dealing clerks further delayed customer service.
4. There was also improper working of intercoms between different floors leading to undue delay in transmission of messages, etc.
**Solutions**

1. Before and after office hours, floors and counters were to be swept and cleaned.
2. Bicycles were to be kept outside the banking hall.
3. Proper seating arrangement of officers and clerks as well as proper legible name boards to be placed in front of counters.
4. Non-oriented customer sections, which were previously on the ground floor taking much space, were to be shifted to the first floor.
5. Counters, intercoms, coolers and lockers were to be repaired.
6. Bright coloured curtains, green plants, etc., were to be used for decoration and livening the premises.

**Results**

After the implementation of the solutions, the branch was given a good face lift and the aesthetic appeal of the branch layout was improved. The customer waiting time was considerably reduced in all sections and work was carried out much faster. The efforts to QC were appreciated by all.

**Problem No. b: Improper House-keeping**

There was pending work due to inadequate staff strength as well as due to uneven distribution of workload among staff members. Books had not been tallied for many months and there was a general tendency of postponing work and lack of interest in doing work.

**Solutions**

1. Uniform allocation of work to staff members
2. Tallying of Savings Bank ledgers to be shared and done by all officers
3. Request for surplus hands (on deputation) from Regional office
4. Balancing of Savings Bank ledgers on leaner days, having less work load
5. Managers to personally review the progress in balancing of ledgers

**Problem No. c: Lack punctuality among Staff Member**

1. Late arrival of staff members, resulting in customers’ waiting impatiently for a long time
2. Staff members out of seat for a long time during business hours
Members of the QC analysed the causes and effects of the problem and solutions were arrived at which were successfully implemented. Like in earlier instances mentioned above, improper transport facilities and long distances were the main reasons behind lack of punctuality. Adequate measures were taken with re-allocation of duties to those staff members who lived nearer without jeopardising and disturbing customer services. Again, it may be mentioned that no financial cost was involved.

*Source: Lal (1994)*

**Case 2: State Bank of India, Gwalior Branch**

**Background**

On 5th August 1986, QCs were formed and within 2 years the staff members from all strata had presented more than 6 projects.

**Problems**

Through brainstorming sessions, the problems were identified and weightage was attached to each of those:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer dissatisfaction</td>
<td>31%</td>
</tr>
<tr>
<td>Ledger movement from one place to another</td>
<td>22%</td>
</tr>
<tr>
<td>Tapping solar energy and canteen facilities</td>
<td>18%</td>
</tr>
<tr>
<td>Blank documents to be located</td>
<td>15%</td>
</tr>
<tr>
<td>Space shortage and its reallocation</td>
<td>14%</td>
</tr>
</tbody>
</table>

The first problem with the highest weightage, i.e., the problem of customer dissatisfaction, was immediately tackled and the causes were listed through the Fish-Bone diagram.

**Solutions**

1. Two separate cabins for cash and clerical counters were made.
2. Racks were procured for keeping ledgers.
3. A set of pigeon holes were built for simultaneous posting of vouchers.
4. Drawers and furniture were repaired.
5. Paying slips and pens were readily made available at counters.
6. Seating re-arrangements and re-allocation of duties for officers and clerks.
7. Enrichment of job knowledge through intensive training courses for all both formal and on-the job training.
8. Separate tables were provided for Deposits and Advances for smooth operations.
9. Tables were rearranged in a symmetrical manner, thereby, reducing dependence on messengers.
10. Inlet to cash cabin was closed and F.O. Government table was shifted elsewhere thus, avoiding incidence of fraud.

**Benefit**

1. Some tangible benefits were apparent: old furniture was repaired and made usable, war and tear of ledger was reduced, services became faster, inconveniences of staff members and customers were reduced, etc.
2. Intangible benefits were also felt like comoraderieship, team building spirit, improved industrial relations, upgradation of branch and its improved image, etc.

Such benefits, both tangible and intangible, had productive repercussions. Business growth increased from an earlier 32% per annum to more than 106% per annum. This is a remarkable achievement.

*Source: Lal (1994)*

**Case 3: LSS Hospital, Kota**

On 17th October, 1988, a QC was formed in the name of ‘Cure’ in the Nursing Staff section of LSS Hospital, Kota.

**Problem**

The problem that was identified was Improper House-keeping. The Cause-and-Effect Diagram is as follow.
This resulted in loss of money, loss of material, loss of customers, tarnished hospital image, loss of harmony amongs: staff patients, lengthy and laborious working, and suffering of patients.

**Recommendations**

The QC recommended the following:

1. Introduction of check-sheet
   - General ward material
   - Nursing ward material
   - Emergency Drugs
   - Instruments

2. Shift ward-boy should report to shift sister-in-charge

3. One separate lab attendant for pathology lab and radiology unit

4. Quick communication system to call ward boy or doctor in campus by call bell or intercom

5. Liquid soap container in wash basin instead of soap cakes

6. Check on washer man
Results

The results of implementation are shown in the following graph:

![Graph showing the reduction of working problems](image)

The working problems got considerably reduced within 4 months from the initiation of the QC, thereby, leading to improvement in house-keeping and improving the image of the hospital.

Source: Udpa (1992)

Case 4: Workshop, University Polytechnic, Aligarh Muslim University, Aligarh

The QC under consideration has a leader, facilitator, a coordinator and four members. The object of the QC is ‘reduction of material wastage’. The QC is operating in the Machine and Fitting Shop.

Problem

There was difference in the actual and expected material consumption. Table 1 gives the details of material consumption for the year 1999 to 2000 before implementation of QC and Table 2 shows the details of material consumption for the year 2000 to 2001 after implementing QC.
After various discussions and brainstorming sessions following causes related to man, machine, materials and methods were identified.

- **Causes related to Man**
  a. Lack of knowledge about the materials
  b. Proper instruction not given about work
  c. The materials were cut more than required amount
  d. Lack of knowledge about the operations
  e. Lack of knowledge about handling special tools

- **Causes related to Machines**
  a. Machines not operating at optimum condition
  b. Frictional wear of machine parts
  c. Problem arising due to misalignment of machine components
  d. Lack of implementation of new and automatic machines

- **Causes related to Methods**
  a. No proper inspection in the machine shop after the material has been issued from the store
  b. No proper care was taken in storing the materials
  c. Lack of knowledge for improving the existing method of production

- **Causes Related to Material**
  a. No proper inspection of the material dimension before machining
  b. Materials obtained not having the required composition

**Benefits**

After implementation of QC, steady reduction in material wastage was observed. Considering the material wastage for the year 1999-2000 (as a base year), calculated...
savings were calculated for the next one year (2000-2001) and is shown in Table 2. Besides this, Table 3 gives the complete details of the monetary gain for the year 2000-2001 which shows a substantial amount of savings.

Table 2 Details of material consumption for the year July 16, 2000 to March 31, 2001 (after implementing quality circle)

<table>
<thead>
<tr>
<th>Items</th>
<th>Specification</th>
<th>Material Consumption</th>
<th>Material Cost per year</th>
<th>Loss in Loss in</th>
<th>Expected</th>
<th>Actual</th>
<th>Marking Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild Steel</td>
<td>Length, mm: 50</td>
<td>210</td>
<td>150</td>
<td>60</td>
<td>1020.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block</td>
<td>Diameter, mm: 35</td>
<td>100</td>
<td>135</td>
<td>105</td>
<td>960.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cast Iron</td>
<td>Length, mm: 50</td>
<td>105</td>
<td>105</td>
<td>100</td>
<td>900.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flat</td>
<td>Width, mm: 50</td>
<td>45</td>
<td>45</td>
<td>30</td>
<td>150.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 Saving in the material wastage for the year 2000-2001

<table>
<thead>
<tr>
<th>Material Wastage before Implementing Quality Circle, Rs</th>
<th>Material Wastage after Implementing Quality Circle, Rs</th>
<th>Savings Amount Rs 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>4142</td>
<td>2132</td>
<td>2010</td>
</tr>
</tbody>
</table>

Following improvements were achieved after implementation of QC:

i. Improvement in inter-personal relationship.

ii. Self-confidence was developed in solving more complex problem related to production.

iii. A good teamwork was achieved among the workman.

iv. Material wastage was minimised and, as a result, substantial monetary gain was there.


Case 5: QCs on pharmacotherapy (Germany)

The general aim of QCs was to facilitate prescribing rationally, making prescribing routines in daily practice more transparent, and to enable doctors to change their prescribing habits. Starting in 1996, a specific programme to tackle problems relating to rational prescription for common conditions was developed. The programme was piloted in one region with notoriously high-prescribing general practitioners (GPs)
and then propagated into two other regions in Germany as well as introduced numerous networks of ambulatory care.

Method

GPs were trained as moderators and asked to recruit participants for QC work. The emerging QCs met about 10 times in monthly intervals, following a curriculum of defined indications for prescription. Participants were provided with (i) data in each session about their prescribing to date (baseline compared with the mean of the test group and with that of a control group without intervention); and (ii) advice on evidence-based recommendations for the given disease. Six months later, a follow-up meeting took place where the participants received similar data for the quarterly period following the intervention.

Results

The programme was successful (30%–70% of all GPs participated) in two German regions (Hesse and Saxony-Anhalt) and it was implemented in various networks of physicians as a module of Quality Improvement. Total participation was 800 GPs (in 2001). As Saxony-Anhalt is one of the new federal regions, physicians based there considered the programme as a particularly useful device with regard to the pharmaceutical market. Evaluation indicated that 5%–15% of prescription costs could be reduced compared to a common trend of increase, while the appropriateness of prescription (for conditions such as hypertension or asthma) increased. Since then there were more sessions with one session on the evaluation of prescriptions for a typical chronic disease [chronic obstructive pulmonary disease (COPD)] and one about drug risks for elderly people. Within ambulatory care networks, the programme was extended to other expensive items such as hospital admission or physiotherapy.

Source: Szecseny1, J., Broge, B., Clause, E. and Glaeske, G. (1996); Andres, E., Szecseny1, J. and Broge, B. (1997)
Case 6: The Public Works Department of Government of Maharashtra

The Public Works Department (PWD) of Government of Maharashtra is responsible for the construction and maintenance of about 2.00 lakh kms. of road network in the state and a large number of Government-owned buildings spread all over the state. The road network, apart from the national-level traffic, caters to the needs of the rural-area traffic. The climatic and geographical features also vary from place to place in the state. The ultimate customer of the PWD is the common people and it is not generally easy to satisfy the ultimate needs of these users to the fullest extent merely by taking decision at the top level. The subordinate officers and staff working in the field and who are well-acquainted with the day-to-day problems in their work areas are the best judges to decide upon the course of action. The top management in Maharashtra PWD realised this need and introduced the concept of QC as an employee-participation method in the organisation. The concept of QC was launched in the PWD of Govt. of Maharashtra on 18-11-1997. In a span of about a year 17 QCs were formed in Mumbai Region, wherein 22 problems have been solved so far. 48 QCs were formed in Pune Region, wherein 8 problems have been solved so far. Nashik Region of the PWD formed 9 QCs and solutions to 3 problems have been found out so far. Aurangabad Region formed 21 QCs and have solved 7 problems so far. Nagpur Regions formed 47 QCs and found out solutions to 57 problems so far.

The results of a short period of one year have been found to be very encouraging so far and many of these QCs have already come out with solutions to the various work-related problems as evidenced from the last two state-level conventions held at Mumbai and Aurangabad respectively. The presentations by the various QCs at these conventions bear testimony to the fact that the concept of QC has been received with much enthusiasm at the grass-root level. These presentations also provide concrete evidence, fulfilling the expected benefits of the QC. Taking inspirations from these conventions, more staff of the PWD have come forward to form QCs, vindicating the fact that QCs have come to stay in the PWD.
Some of the problems solved by the QCs in PWD of Maharashtra are as follows:

- Eliminating delays in issuing observation memos after inspection of site
- Preventing accidents on highways
- Reducing electricity bill in office
- Avoiding duplication of work
- Removal of encroachment from Government land
- Speeding up pothole filling on roads during monsoon
- Upkeeping of service records of employees
- Maintaining Govt. offices clean
- Streamlining system of reserving Government rest houses
- Improvement in maintenance of Government Hospital at Solapur

Some of the problems and the solutions thereof are explained briefly below.

- **Delay in issue of observation memos**

The PWD of Maharashtra is divided into six regions, each headed by a Chief Engineer. Each regional Chief Engineer is assisted by a Superintending Engineer, Vigilance and QC who with the help of 2 Executive Engineers and about 6 Deputy Engineers carry out inspection of the on-going projects. The samples of the construction material being used on project are collected and independently tested in the Regional Testing Laboratories to ascertain the level of acceptance. The findings of the inspections are communicated to the field engineers in the form of ‘observation memo’. It is contemplated that the Execution Engineer in charge of the project ensures immediate compliance of the remarks made in the observation memo and takes out corrective measures in the on-going project as well as preventive measures for the future work.

However, very often, the observation memos are issued after much delay, defeating the very purpose of the observation memo. This problem was identified by the ‘OMKAR’ QC formed in the office of Superintending Engineer, Vigilance & Quality Control Circle, Navi Mumbai. The members used various tools and methodology,
identified the various root causes that led to this problem and finally solved the problem in a fool-proof manner.

By solving this problem, it became possible to improve the quality of work in the field which ultimately brightened the image of the PWD. The formation of QCs also benefited employees by providing

a) a systematic style of education that helped them grow.
b) freedom to modify their work habits.
c) opportunity to use their brain for development of the department.
d) opportunity to work as a team.

For employees, these led to improvement in work culture, self-improvement recognition and creativity at work.

Preventing accidents on highways
It was observed that the accident rate on Sion - Panvel Highway, passing through New Mumbai had gone up sharply. The QC members collected the data from the respective police stations and identified the important causes of accidents by using Pareto Analysis. They segregated the causes under the categories - Man, Machine, Material and Method. The QC members found out solutions to the problems, such as closing of central verge at all locations except junction, frequent lane marking, installation of caution boards, providing lay-byes for buses, etc. The data collected on accidents for a period three months, after implementation of solutions near Shirvane and Turbhe, revealed that the causes of accident had been eliminated and no more accidents occurred at those locations again. This way the QC members ensured the effectiveness of the solution implemented. They made presentation before their steering committee for obtaining sanction to implement other solutions, involving more funds.

Source: http://government & QC.htm

Educational institutions today face the challenge of providing quality education even with tight budgets. A tool that may help educational institutions meet this challenge is
the QC. In industry, QC have been known to increase productivity, improve quality, boost employee morale, and serve as a human resource development tool. These benefits may be accrued in the educational sector. In fact, QCs in community colleges have been used to solve problems in administrative departments (Ladwig, 1983; Moretz, 1983), and in student support services (Ladwig, 1983; Cohen, 1983). Examples of QC applications at the community colleges are described below.

**Central Piedmont Community College (North Carolina)**

As a part of a campus-wide effort to incorporate QCs in college operations, Central Piedmont Community College (North Carolina) established a QC at one of its off-campus learning centers. The QC, composed of the director and volunteer staff members, used brainstorming to develop a list of goals for the center, rank ordered those goals by priority on a decision grid, and drew cause-and-effect diagrams to determine why those goals aren't always met. In the course of this analysis, the QC participants determined that a better telephone system was needed to help the center achieve its objectives. QC members listed the ways in which the telephone system undermined the center's efficiency, kept a log sheet for a month to document the occurrences and nature of those telephone problems, and developed recommendations for changes in telephone equipment and configuration. The QC not only solved the telephone problem, but also produced a net savings in staff time of about $100 per month. Moretz (1983) details the accomplishments of this QC and reviews the administrative procedures used by Central Piedmont Community College to implement QCs in all aspects of campus management.

**Middlesex County College (New Jersey)**

Middlesex County College (New Jersey) turned to QCs in an attempt to improve the cost efficiency of the Project COPS (Career Oriented Peer Services), a peer-tutoring program that matches second-year tutors with high-risk, first-year students. QCs were deemed an inexpensive way to increase tutoring effectiveness and to help student tutors prepare for the world of employment. Two peer-tutor QCs were established—one composed of peer-tutors from the business-oriented disciplines and the other composed of peer tutors from the engineering programme. The business-oriented
circle focused on the overdependence of tutees on the peer-tutoring staff and recommended solutions, including a stronger emphasis on tutee note-taking, time management, attendance and other factors that are central to a student's self-reliance. The engineering-oriented circle concentrated upon improving campus awareness of the peer-tutoring center through utilization of faculty announcements, student clubs, faculty advisors and other means. Cohen (1983) provides further information.

*Lakeshore Technical Institute (LTI)*
The LTI Board of Education implemented a campus-wide QC project because faculty, management, and support staff expressed a desire to improve work efficiency and to become more involved in campus decision-making processes. Two types of QCs were implemented—management circles composed of administrators, programme supervisors, programme coordinators and educational specialists and non-management circles composed of faculty and support service staff. Each circle met to identify problems and to find solutions. Among other accomplishments, the management circles developed an idea/suggestion memo system, intramural sporting events for LTI staff, guidelines for recognising staff service, and a "who's who/what's what" recognition programme. The non-management circles recommended the development of a computerised information system to assist faculty in record keeping, work processing, and grading. On the whole, the response to the QC project at LTI was favourable. Improvements in employee attitudes, the quality of instructional and support services, and the work environment itself were seen as the result of the project. Ladwig (1983) provides an in-depth analysis of this project.

**QC vis-à-vis Total Quality Management, Total Productivity Maintenance, Employee Circle Programme and Central Quality Circle**

Success or failure to respond timely to innovative changes depends on the ability and willingness of an organisation. The Indian industrial organisations are passing through a turbulent and challenging phase and any new liberal economic policy is going to make wide and far-reaching impact on how the resources, technology and people are managed.
In any bureaucratic set up, emphasis has always been on the ‘system’ rather than the ‘people’, who are taken for granted. The past decades, with no emphasis on quality, what could have otherwise been a period of prosperity and well being, both from the consumer and manufacturer points of view, had been a period of scarcity and all-around suffering. All those years, thoughts on quality were not allowed to percolate either from Japan or the USA, as the Indian economy, as a whole, was protected and kept insulated. It is no doubt that suddenly, with the opening of the gates, everyone is running around trying to instil quality consciousness and effective management system to compete in the global market. The point of departure is the customer and not the product or even technology. This means that company must structurally reorganise itself to survive stiff global competition. To promote ‘the best in class people’ priorities have to be shifted to suitable recruitments, placement, training and developing on organisational culture which motivates people. The entire operation gets shifted to ‘workers’ teams and the managements’ role become supportive’. Traditional supervisors will no longer be required when employees change to self-direction and self-control. A new flexible, creative work place will emerge. In nearly all business organisations, a ‘cult of performance excellence’ will prevail. The basis for creating new value in any organisation will be team work and cooperation. QCs have to become an integral part of TQM. As mentioned earlier also, there has been much erroneous thinking that Japanese products achieved quality excellence due to QC activities alone. Experiences in Japan have revealed implementation of TQM well before implementing QC. In fact, where QC activities began earlier to TQM, like in the service sector companies in Japan, they faced numerous problems. People at the bottom were enthusiastically engaged in QC activities, while the management, unfamiliar with the programmes, were literally doing nothing.

**Total Quality Management (TQM)**

TQM has to be viewed in a much broader perspective. One can list out 6 major requisites to implement TQM, without which QC activities have no meaning.

(a) Modifying the reward system so as to encourage learning ability team spirit, empowerment, etc.

(b) Redesigning the performance appraisal system based on measures of excellence,
values, leadership behaviour, customer service, etc.

(c) Re-orienting the selection system towards identifying values of potential candidates, their backgrounds, their dedication, etc.

(d) Changing compensation practices with a view of eliminating incentives based on numbers and focusing more on sharing performance based gains equally.

(e) Changing the communication system so as to encourage patient listening to customers, sharing information, publicity of improvements, etc.

(f) Modifying the strategy for training based on selecting successful trainees, allocating sufficient time to each employee, and linking training to vision, reality and decision making.

The human resource, thus, is at a premium today and the traditional hierarchical corporate is beginning to give way to a flattened and more horizontal structure. A noted behavioural scientist, Chris Argyris, was also of the view that the ‘pyramid’, due to inherent imperfections cannot survive for long and requires modifications. In his modified model, ideas may flow both ways - upwards or down - wards or alternatively power may temporarily be delegated to a team of workers.

In a traditional society like India also, which is based by ancient cultures and hierarchies it may not altogether be possible to completely do away with the ‘pyramid’ at the very beginning, but gradual modifications over time cannot be ruled out. The authoritarian attitude can be relegated to the back seat with total co-operation from above. Basic organisational values have to be modified and changed in the right perspective. One can get people to develop their skills not by steering them with fixed rules but by giving them enough flexibility and total responsibility to achieve a specified result. The new concept ‘synergy’ refers to the idea that a group of individuals in the same work environment are better equipped to solve their work problems than an individual working alone.

**TQM vs. TPM**

The term ‘Total Productivity Maintenance’ (TPM) is again of Japanese origin and is very much in vogue. This was first developed by Nippon Denso (pioneered among others by S. Nakajima). It was noticed by the management experts that most of the equipment/machine-oriented problems originate from routine causes like poor
lubrication, lack of cleanliness, deterioration of few relatively-simple machine parameters, etc. The task of Control Charting, which, as part of QC, can be shifted to operators, self-control can account correction of 80-90% of process quality problems. TPM also tries to shift 80-90% of routine maintenance problems to operators before specialists help is called for and received.

The Japanese Institute of Productive Maintenance (JIPM) has provided a specific definition of TPM. The general features may be stated as follows:

(1) It is aimed at maximising equipment effectiveness.
(2) It establishes a total system of productive maintenance, covering the whole life of equipment.
(3) It covers all departments, such as the equipment planning, usage, maintenance departments and so on.
(4) It is participated by all staff members - from top to shopfloor workers.
(5) It promotes productive maintenance through autonomous small group activities (SGAs).

Thus, unlike TQM, which is applicable in all fields, TPM centres around manufacturing plants and production systems that combine men and machines i.e., is a man-machine system and the goal of TPM is, thus, said to be maximisation the effectiveness of this man-machine system at the minimum life cycle costs (LCC). TPM also aims to thoroughly eliminate the 'six big losses' that interfere with the effective operation of the system, i.e., failures, set up and adjustment problems, idling and minor stoppages, reduced speed, defects in process and reduced yield.

Some management experts regard TQM as quite different from TPM and feel that the former is more relevant when dealing with people and their productivity. The latter is more a concern and branch of 'Ergonomics', when people have to deal with machines. They feel that whereas TQM centres on the implementation of a management system such as systematization and standardisation, TPM improves the operation of the equipment itself and aims at realising its ideal form, i.e., complete elimination (zero) of the 'six big losses.'

However, others are of the view that TPM is a part of TQM and cannot be treated in isolation. An operator has to have full knowledge of maintenance before he/she can totally achieve TQM. The goal of TQM is improved quality, which is possible
only if TPM is also totally achieved. The operators have to develop autonomous maintenance activities for achieving total effectiveness. And, since these cannot be introduced overnight, intensive personnel training in the knowledge and skills peculiar to maintenance along with the management techniques, such as QC, for ultimately achieving TQM, can be the only solution. SGAs have to become an integral part of the work place. JIPM in Japan has introduced the step method for creating autonomous maintenance. Under this method the equipment which one is currently operating is used for one-the job training often referred to as Total Quality Training, and the operator gradually acquires maintenance knowledge and skills through training and implementation at each step, and, as he/she moves up through the steps, he/she gradually builds up a ‘willingness’ to implement TPM. Hence, to achieve TQM, which would be incomplete without total productivity management, it is essential to have Total Quality Environment (TQE).

**Employee Circle Programme**

The term Employee Circle Programme may replace QC since quality is an integral part of day-to-day activities of the employee and cannot be segregated from his/her work operations. QC portrays a feeling of a limited and micro-approach concerned only with the quality aspect of business operations. Quality is a culture and at each level of operation it has to be faithfully carried out, without really attempting a conscious effort to improve quality. A Japanese worker once remarked that their products do not require quality testing, since all are quality products and virtually no separate department is in existence for quality control. Each worker consciously produces the best. For example, in the Kansas plant in the USA where workers’ output increased 80% in just six years. If something has to be moved with a fork-lift truck, no one yells to the fork-lift truck driver because there isn’t such a driver. Instead, anyone at hand hops on to the truck and gets the job done (Cole and Tachiki, 1984). Such a culture has to be imbibed right from the top-most level to the bottom-most level.

**Central Quality Circle or CQC**

A sincere commitment to the concept of leading others to lead themselves is needed for the process to really work. Allowing a few employees to set in QCs every
week is a small step towards a much bigger goal. The concept needs to permeate the whole corporate philosophy and values. A concept of self-leadership has to emerge on a national scale. One could start by establishing a CQC with Head Office at a metropolitan city on the lines of National Institute of Bank Management (NIBM). The NIBM, manned by management and statistical experts, could come out with valuable guidance, and periodic training facilities, organise seminars/symposia, and publish materials, etc., for all cadres in an organisation. Such services would give a national character to the movement and promote cohesiveness at all levels.

QCs - The Indian Case
QCs in India have not progressed as much as one would have hoped and the enthusiasm with which it was started has gradually died down. The Japanese package has been lifted in toto and the results have been less than spectacular. The problem is not with the ideas but more with their implementation in the Indian situation. Is it possible to have a successful structured transfer? How far can an international success be acceptable in the Indian conditions? Germany's co-determination could not practically be applicable here. It is erroneous to imagine that a package which has been successful in particular conditions elsewhere, can also be a success if fully implemented here without any modifications. Though some features of the Indian society may have a unique resemblance with those of Japan (like EGALITARIAN SOCIETY, LIFE TIME EMPLOYMENT, and LOYALTY towards the organisation), Indians are nevertheless diverse in many respects, such as rate of literacy, organisation at size, etc. One has to find means to make it a success. Just as the Americans evolved a model of QC to suit their own environment, Indians too, can have an Indian model to suit their own conditions. Even Juran, the leading quality management expert, is of the opinion 'whether the QC concept can be adapted to other cultures is at present open to serious doubt'. (Juran, 1967)

Another Japanese, scholar Hajime Nakamura, portrays Indians as people oriented to 'abstract rather than concrete thinking with a flair for negative rather than positive thinking'. Indians are inclined to accept things as they were, rather than change them through individual or collective activism. It is often not possible to totally adopt a
new system because a country may be too tradition bound or people may be too timid. Though Japan is politically democratic, it is nevertheless a tightly-run state. A typical Japanese is temperamentally a conformist. Hence difference in cultural and traditions, attitudes and human behaviour often make a successful programme somewhere unsuccessful is another situation.

According to Lal (1994), a study authored by Professors at University of New Brunswick, Canada and Professors at International Management Institute, India, has come to the conclusion that the Japanese style of consensus management and workers’ participation have failed to work in Japanese subsidiaries operating in India. They have further commented that some human resource management practices, like employee representation on board, hiring, promotions and lay-offs, are identical to the Japanese way but where decision making, labour management relations, training and work ethics are concerned, there are major differences. ‘Indian decision-making is a process of consultative activity but the final decision is always made at the top’.

Another study reported by the Asian Productivity Organisation - Report on Labour Management Consultation Mechanism Survey, Tokyo, 1984, has observed that very little power to influence changes, even regarding work practices, is left with the ordinary workmen. The survey came to the conclusion that, whereas in Japan, the power distance between top management and ordinary workers is 2.33, in India that is 2.03 (APO, 1984). The findings further reflect the negative power distance existing between management and workman in Japan on work issues. Other studies made by the Indian Statistical Institute in India have also confirmed the authoritarian attitude of the management and that majority of problems are attributable to management failures (80%-85%). This is further evident when one compares Japanese style of personnel management with those of Indian and others in the world (Toyohiro, 1984).

Requisites for success of QC's in India

While it is important to know about the successful programmes of Japan or the USA or for that matter any other country, it is much more relevant to find out India’s own innate limitations and strengths and then try to energise all efforts to productive gains while minimising or overcoming weaknesses. In the Indian
Model, care has to be taken to ADAPT to and definitely not ADOPT the entire Japanese programme. Only those features need to be considered which are feasible to implement and can be operated smoothly, while modifying the others. The Indian society and work culture is still at an intermediate stage and programmes have to be designed accordingly.

(a) abandon the voluntary nature of the QCs for the time being

Indian workers, managers and even the Government are not yet enlightened enough to accept the philosophy of QC and operationalised it. The very idea of it being voluntary in nature throws the programme at the background, particularly when there is no direct and immediate benefit for the workers. Sooner or later with little or virtually no encouragement from the top, they lose all interest. Here one cannot altogether blame the top management because they too are unfamiliar with the movement and have not undergone any specific training. QCs have to be COMPULSORY and embedded in the work culture of the organisation. (Lai, 1994)

(b) QCs activities - a part of HRD functions

The HRD department of an organisation has to bring under its wings the operations of QCs. As soon as an employee joins an organisation, it becomes the duty of the said department to make him/her familiar with the philosophy and ideas of QC and gradually inculcate in him/her the QC culture. Only then will the worker be able to identify himself/herself with the programmes and rightly accept those as a part of his/her routine work. In the 'pyramid' structure of QCs, HRD department has to have an important place. Though its jurisdiction will be limited and may not be permitted to intervene in the weekly meetings or brainstorming, it can nevertheless rightly and positively prepare the potential QC members much prior to its inception. This would automatically relieve the burden of leaders and deputy leaders who have to go through the routine every time a new member joins. Moreover, with prior training and orientation, members themselves may feel much more at ease with the functioning of QCs. (Lal, 1994)
(c) training programmes for new members

There has to be a conscious emphasis on training programmes conducted by the HRD department. Training has to be imparted at the probation stage itself, both internally as well as under guidance of competent and specified authorities. The purpose of training would be to equip the employee to become quality conscious right from the start. This is true for top level managers also who could benefit much from training programmes enlightening them to accept workers' participation and involvement in totality. The desirability of quality has to be imbied and appreciated by all. A detailed process of training and convincing, thus, becomes a must. Any half-hearted attempt of starting a programme without appropriate preparation is likely to end up in failure and loss. (Lal, 1994)

(d) Juran's 'fear' psychosis

Adopting Juran's 'fear' psychosis can be the only way out to imbibe quality consciousness. By making QC activities a part of the work routine, there remains little scope for workers to complain about becoming 'over burdened' or 'over worked', with no time for such activities. A change as radical as such cannot be cultivated in a short period but has to be developed by concerted efforts of all - the management, workers, trade unions, HRD department and, of course, the Government. A change in the right direction can be hoped for. QC activities have to be conducted continuously for many decades to generate any fruitful, desired result. In Japan, they have continued for more than 30 years now.

Thus, India, with little modifications of the Japanese Quality Control Circle (QCC) structure, can go a long way in finding a top place in the global market and improving quality of work life (QWL). With the culture of quality consciousness imbied in all Indian organisations, higher profitability with lower costs in future will become a reality. Quality Management concepts become relevant not only for loss-making companies but for the profit-making ones too, who are trying to enter the international market and trying to meet the ISO requirements. No country and no unit should be debarred from the benefit of the philosophy behind QC. QCs, as a part of the overall TQM, are a boon to any economy, more so for a developing economy like India. The modified version of the Japanese structure would be more appropriate and
feasible in the Indian situation. However, it cannot be ruled out that may be in a distant future with a more conscious and literate work force, Indians may be able to successfully adopt the entire Japanese package in totality. QCs have to become a world-wide movement. Not only will there be improved quality of world's good and services, reduction in costs, and consumer satisfaction, but every work place will be much brighter, happier and worthwhile to work in with democratic participation in the real sense. (Lal, 1994)