

## QUALITY CIRCLE - AN APPROACH TO SOLVE POLYTECHNIC PROBLEMS

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### ABSTRACT

*Quality improvement in Technician Education is concern of every stakeholder of the system. The Quality Improvement need intensified in recent time as never before. A systematic approach was conceived at National level, during 1992. Quality Circle approach as planned change to improve quality was refined and modified to suit in Technician Education. The quality Circle Project was planned and implemented in 28 selected polytechnics all over the country. The selection of these polytechnics was based on carefully designed criteria.*

*The critical study was carried out to assess and support the Quality Circle movement in the project polytechnics. This paper is based on the study in India, which gives reality of the outcome of quality improvement attempt. The design, process of implementation, outputs, and impact are explained and presented in this paper.*

### 1. RATIONALE :

Quality improvement issue for Technical Education has been debated, discussed, documented in many conferences, seminars and workshops for last three decades. The need for Quality was consistently felt. Many attempts in the forms of variety of models, projects, approaches have been tried out at different levels in various places.

In post liberalisation era, globalisation of economy and increased competition amongst the Institutions due to societal and stakeholders pres-

sure for overall quality has intensified to such an extent that Institutions survival is in question. Industries are not ready to accept substandard quality passouts from the polytechnics.

National Policy on Education (1986) emphasises on improvement of quality of education at all levels. A project for Strengthening Technician Education in India with World Bank Assistance (1990) had a major thrust area support for Quality Improvement Programme in Technician Education.

The Quality Circle i.e. QC as an approach for Quality Improvement was

conceived and modified appropriately to suit polytechnic education system in Indian context.

## 2. MANAGING THE QUALITY CHANGE :

### A) Quality Improvement Project Design -

The Quality Circle Project has been implemented nation-wide in 14 States and 28 polytechnics in India. A national level experts workshop was organised in 1993 to evolve a model for Quality change in the selected 28 polytechnics of India. A series of workshops were con-

ducted for top level officials to discuss various components of the change. Major outcomes were :

- Commitment of top officials for implementing the change.
- Guideline document at Institute level for managing change.
- Trained Principals in Managing the change.
- Detailed action plan for the implementation.

### B) Organising for the change -

The model for change evolved to improve the quality is given below in Fig. 1 :

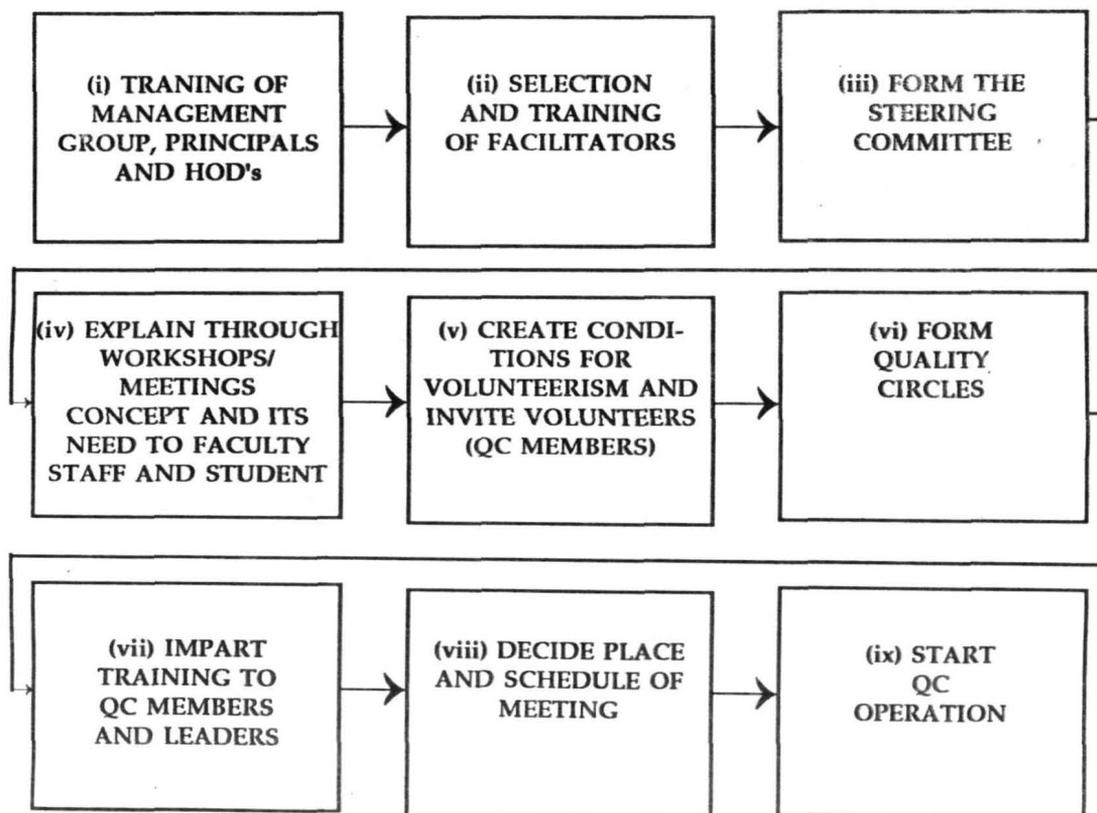


FIG. 1 - THE MODEL OF QC PROJECT

### I. Training of Top level Officials, Principals and HODs

Three workshops were conducted to train Top level Officials, Principals, and HODs of selected polytechnics from various states in India. They were trained in skills of management of change.

### II. Selection and Training of Facilitators

47 facilitators were selected from different polytechnics and they were provided comprehensive training in QC tools and techniques and installing Quality circles in their polytechnic and installing Quality circles in their polytechnics.

### III. Form the Steering Committee

This Committee comprises of the Principal and Sr. HODs who provide support, help, assistance, resources for QC activities and recognise the achievements of the QC.

### IV. Explain QC concept and its need to

faculty, staff and students

The trained facilitators conducted series of programmes to introduce quality circles in their respective institutions. They also used different types of media to create awareness and develop quality consciousness. In this endeavour Steering Committee extended full cooperation and support. The facilitators obtained help from National Experts in this venture.

### V. Create condition for Volunteering and Invite Volunteers

The facilitators invited the faculty, staff and students and conducted clinical workshops regarding the launching the quality circles in the Institution. They also invited volunteers for membership.

### VI. Form Quality Circles

Quality circles were formed by the facilitators considering the interest of the volunteers in various areas as shown in Fig. 2.

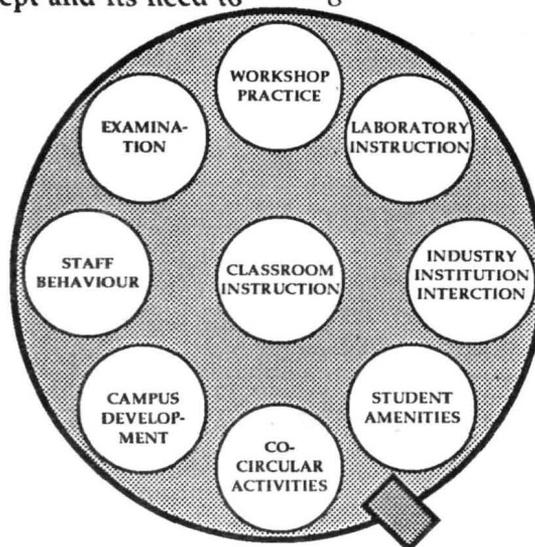


FIG. 2 - AREAS OF QUALITY CIRCLES

The relationship among the Steering committee, facilitator, QC leader, members and beneficiaries is as shown in Fig. 3.

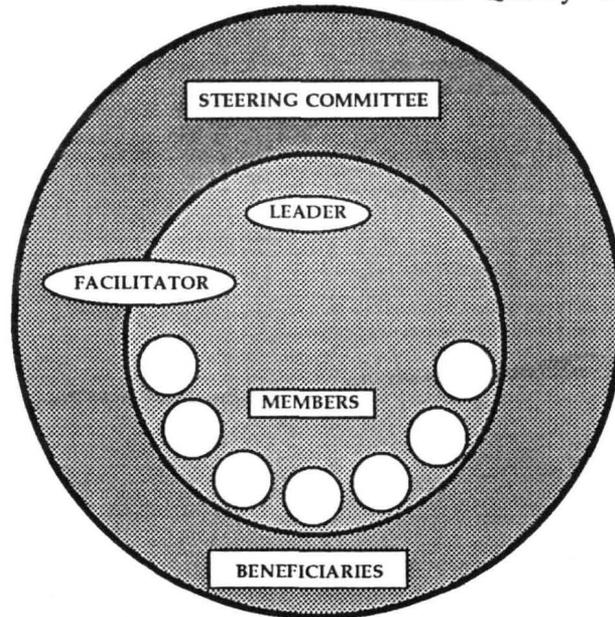


FIG. 3 - STRUCTURE OF QUALITY CIRCLE

The members in each QC polytechnic were from all status of the institution like students, staff and faculty members.

#### VII. Impart training to QC members

Intensive training programmes were conducted by steering Committee members, facilitators and experts for QC members and leaders. They were provided skills in problem solving, decision making, leadership, group working, communication, implementing action plans, preparing cases and presentation skills.

#### VIII. Decide place and schedule of meeting

Each Quality Circle decided its venue and schedule of meetings. Most QCs met once in a week and some met

once in fortnight for an hour or so.

#### IX. Begin QC Operation

Most Quality Circle started func-

tioning immediately after training of the members. Monitoring workshops were conducted by group of experts to provide support and guidance in the respective states.

#### 3. ACCOMPLISHMENTS

In December 1995, comprehensive study was conducted to review the progress of the quality change project. An instrument was designed to assess the progress and MIS was established to support the project in the future the information was clustered under various categories. During the first year of the functioning of the QCs in polytechnics information was obtained from 13 polytechnics.

a) Areas of QC - There were nine ar-

areas in which 34 QCs were functioning. The three most crucial areas appeared to be classroom instruction, laboratory instruction and Student amenities.

b) **Participation** - In all the 13 polytechnics, 183 faculty members, 68 Technical support staff members, 14 ministerial staff members and 74 students participated in QC operation.

c) **Problems undertaken** - The number of problems analysed and solutions implementing/being implemented by various QC groups in polytechnic in various areas are given below :

- started many student-centred activities in the institution
- improvement in the attendance in laboratory work
- latest books, periodicals, journals made available to all, by student amenities group
- reduction in absenteeism of students in classrooms
- more participation and involvement in laboratory work
- ragging practices eliminated in some polytechnic and reduced in the most of the polytechnics
- overall improvement in cleanliness of the campus

Sr. No.	Area	No. of Problems undertaken
1.	Classroom Instruction	38
2.	Laboratory Instruction	60
3.	Industry-Institute-Interaction	06
4.	Student Amenities	40
5.	Co-Curricular Activities	01
6.	Campus Development	01
7.	Change in attitude	06
8.	Examination	09
9.	Workshop Practice	10

**4. SIGNIFICANT OUTCOMES :**

Most of the polytechnics reported considerable involvement of different stakeholders in QCs for improving quality in different areas. The significant outcomes are :

- innovation in instructional process

- improvement in sensitivity towards environment
- safe drinking water made available
- involvement of students in work-related problem solving
- positive attitudinal change occurred in supporting staff

- effective interaction for strengthening relationship with stakeholder groups
- sense of belonging and owning polytechnic and its resources
- transparency in institutional working
- more awareness and consciousness for quality of work.

#### 5. DIFFICULTIES / PROBLEMS ENCOUNTERED BY QUALITY CIRCLES

Various problems and difficulties were reported. Majority of the problems were related to inadequacy and non availability of physical resources, and shortage of manpower. Some problems related to attitudes of the members in the form of resistance to change and commitment for voluntary work observed by the QCs. Delays in admission and frequent transfers of the key members had created difficulties in the functioning of some QCs.

#### 6. NEED FOR NETWORKING

Almost all QC leaders expressed concern over the access of information for effective functioning of QCs. There was a lot of communication gap among the QCs within the institution and QCs functioning in other institutions. A need for establishing network among QCs within a polytechnic and QCs of different polytechnic is now being felt. The networking of QCs in a polytechnic can be done for effective functioning and

extending outreach.

Looking to the need for well developed information systems subsystems and its networking at various levels has to be designed. The purpose of such network would be

- Exchange of Information
- Exchanging media resources
- A pool of cases in various situations
- Adopting / Adapting innovations in similar situations
- A common understanding of quality
- Exchange of literature.

#### 7. CONCLUSION

The Quality Circle approach for quality improvement in the polytechnics has brought new dimensions for shifting dependence for decisions and actions by conventional bureaucratic approach to self help. Empowering employee along with students exhibited considerably owning the responsibility of managing the institution. This change revealed that quest for the quality service is in the hands of all employees and students. This success of Quality Circles helped in growing number of QCs in the project polytechnics. This quality improvement approach is required to be spread in other polytechnics in the country. The sustenance of the success will lead to Total Quality Improvement and emerging a centre of excellence of its own in the Technician Education system in India.

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