Background information on the history and use of quality circles is provided in this paper, along with a discussion of the applicability of this management technique to the community college setting. First, introductory material is presented on the development of the approach in the early 1950s, its widespread use in the industrial and business community in Japan, and the effect of the technique on quality control. In the next section, a quality circle is defined as a group of workers from the same area who meet each month to discuss their problems, investigate causes, recommend solutions, and take corrective action when authority is in their purview. Next, a profile of the quality circle is presented, focusing on factors such as costs, training, group membership, the roles of facilitators and steering committees, philosophical considerations underpinning the concept, commonly used techniques (e.g., brainstorming, problem solving, data gathering, and theme development), and pitfalls to be avoided. After pointing to the features of the quality circle approach that make it applicable to an educational setting, the paper sets forth fundamental principles to assist in implementing quality circles (e.g., creative problem solving is used; the purpose of the problem solving is improvement of the product, production, etc.; and the problem solving has positive consequences for the group and is future oriented). In the next section, ways of overcoming administrative resistance are discussed, and classified, maintenance, and custodial staffs are suggested as initial target groups. Concluding comments stress the importance of training and actual decision-making power to the effective use of quality circles. (EJV)
QUALITY CIRCLES IN THE COMMUNITY COLLEGE

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Introduction and Historical Background

The quality circle is a participative management technique introduced by the American statistician, W. Edwards Deming, in the early 1950s. While being a relatively recent approach to quality control and industrial management, the quality circle is perhaps the most famous and popular participatory management technique now being used. At least 200 American companies currently use quality circles; and one American company, Honeywell, had 350 quality circles operating in 1981. Exported to Japan in the early 1960s, the quality circle concept emphasizes a networking approach to management which focuses on human interaction and broad participation in problem solving and policy development. It is in Japan that the quality circle has received its most widespread use. Currently, there are six million Japanese workers participating in more than 600,000 quality circles which permeate all levels of the industrial and business community.

There are many reasons for this successful and widespread use of quality circles by the Japanese. The Japanese factory and corporate social structures do not have abrasive class or ethnic distinctions. Lifestyles are different. Consensus is emphasized in work and decision-making. Unions are company unions and know that their fate lies with the company's. Lifetime employment removes fears that new technology or improved productivity bring layoffs. People identify comfortably with the firm and the quality of its products.
Japanese workers are generalists. They expect to move from department to department and can use on one job the knowledge gained on the last. Most are able to use complex statistical tools to communicate with management and engineers. This is extremely important because workers and foremen can solve only 15% of all quality control problems. The rest must be handled by management or the engineering staff.

Worker development is important to Japanese management. Improving working conditions is also important. Management understands that both affect efficiency, productivity, and competitiveness as well as quality.

American managers can learn a good deal by examining the work of the Japanese in the entire area of quality control, particularly in regard to the quality circle. Rene McPherson summed up management's opportunity in this matter recently when he wrote:

Until we believe that the expert in any particular job is most often the person performing it, we shall forever limit the potential of that person in terms of both his contribution to the organization and his personal development... Nobody knows more about how to operate a machine, maximize its output, improve its quality, optimize the material flow, and keep it operating efficiently than do the machine operators, material handlers, and maintenance people responsible for it.

The people mentioned by McPherson constitute an invaluable resource that management can ignore only at its peril and that of the company. McPherson's comments provide an excellent synopsis of why the Japanese management philosophy, and particularly the quality circle, has permeated American management since the 1970s. The use of quality circles by American managers in business, industry, and education is likely to increase in the years to come.

Definition of Quality Circles

A quality circle has been defined as a group of workers from the same area who usually meet for an hour each month to discuss their problems,
investigate causes, recommend solutions, and take corrective action when authority is in their purview.

The quality circle is a relatively simple concept in which workers in the same work area meet periodically to consider problems in the work environment. These meetings occur during company time to study, discuss, and resolve production and operations issues. Quality circles use the skills and know how of workers who are conversant with daily problems of the work place. Tapping this resource provides job satisfaction and helps to bridge the gap between management and labor. Common results of the use of quality circles include improved product quality, lower production costs, improved morale, and increased inventions. Quality circles have proven to be equally valuable in service industries as well as in manufacturing and trade. Use of the concept has demonstrated that employees will usually take pride and interest in the quality of their work if they have input into the decisions being made regarding that work.

**Profile of Quality Circles**

Quality circles cost very little to implement. Their success depends more on effective training and strong leadership than capital investment. It is a people centered program that maintains and supports itself. Formal training of leaders for the program is nominal. The approach is cost effective and provides a coherent, systematic management strategy geared to the employee. Participation in quality circles is voluntary with the size of the group varying from three to 15 members. Each group usually includes a leader who coordinates the meetings and who is usually the employees' supervisor during regular working hours. In addition, each circle includes a facilitator skilled in communication and problem solving techniques. The facilitator attends all meetings and assists the leader as needed.
In some organizations, a steering committee sets goals and objectives for all quality circles and acts as the Board of Directors. Meeting frequencies vary from once a week to once monthly with the average somewhere in between. Meetings generally occur at the same time and place, whatever the frequency pattern adopted. Typical efforts include reducing product defects, increasing productivity, improving the work environment, and reviewing operational procedure. Circles may also review employee morale, working conditions, and worker recognition systems. Installation of the quality circle concept in business, industry, or education is based on the following philosophical considerations:

1. Workers want to participate in organizational decision making.
2. People want to do a good job.
3. Workers are individuals with brains that should be used.
4. Each worker has unlimited, untapped capacity.
5. Every worker knows best what is keeping him from doing a good job.
6. Each worker is an expert on his job.
7. The company (management and labor) needs each person's help and respects each person's judgment.
8. We (management and labor) as a team can make this a better place to work.

Implementation of these philosophies undergirds a successful quality circle program. The process is people centered. Participants feel that morale is enhanced; quality is improved; and that the circles should be continued and expanded. Techniques commonly used in quality circles to reach this mindset by the participants include:

1. brainstorming
2. problem solving
3. data gathering
4. theme development
5. cause and effect problem analysis
6. decision making
7. recommendation preparation

William Waddell has listed a number of pitfalls for the manager to avoid in implementing the quality circle concept. These admonitions, if heeded, can spare the progressive manager much grief and difficulty, and they deserve repeating:

1. Do not assume results will be immediate.
2. Do not ignore attitude problems from both management and labor.
3. Do not use a team concept unless you are prepared to change.
4. Do not rely fully on internal employees.
5. Do not select the wrong leader.
6. Do not allow quality circles to become independent of management, for obvious reasons.
7. Do not think that controls are unnecessary.
8. Do not underestimate people.
9. Do not overestimate people.

Careful attention to these potential problem areas will enable the manager to maximize contributions of the quality circles, particularly in areas such as education where the concept has not been used as much as in business and industry.

Adaptation to the Community College

Historically, the impetus for improvements in quality control in Japan has come from the marketplace. Recent evidence in American higher education suggests a similar thrust may be developing in colleges and universities. Students and employers are forcing quality up by gradually raising their requirements. Companies are wanting a higher degree of basic skill development as well as occupational and/or vocational skill.
The students are demanding better instruction for the increasing costs to them and are increasing in numbers to take popular courses. The institution that can exert the best quality control will get and retain the most students, and most importantly gain support of the taxpayer from which the greatest source of revenue comes.

Quality circles work in Japan, because they respond to the demands of the culture. They fulfill a distinctive role with the factory, office, and business. Adaptation of the concept to community college education poses an interesting challenge.

It is also important to understand that in Japan quality circles are a management technique. They are a method of mobilizing, organizing, and motivating people; a way of treating them with respect. This concept should work in the community college as well.

Quality circles enable Japanese companies to harness the creative talent and intellectual energy of their employees in order to compete more effectively. Quality circles are based on the idea that everyone would like to use his brain in addition to his brawn. This idea certainly applies in the college setting.

Implementation in the Community College

Kenneth E. Shibata has highlighted seven fundamental principles to assist in implementing quality circles in the educational environment:

1. Creative problem solving is used.

2. The purpose of the problem solving is improvement —
   - product,
   - production,
   - quality of life, school, company,
   - family, or community.

3. The problem solving has positive consequences for the members of the group and is future-oriented.
4. The membership of the group includes representatives of the different levels of the larger group.

5. The activities and procedures of the group respect the strengths and abilities of the members of the group and provide them with opportunities to exercise these strengths and abilities.

6. These activities and procedures give the members of the group a feeling of pride and identity with the school or company, and their efforts are valued by this larger group.

7. Members of a given group share in the achievements of other groups, are aware of their interdependencies and take pride in the achievements of other groups in the school or company.

Through adherence to these principles, community college educators can rely on employees to assist in such areas as: curriculum development and review, use of the computer in instruction, course scheduling, campus wide communications systems, long range planning, student personnel services, campus landscaping and maintenance, and on and on. The possibilities are many. The quality circle concept is bottom-up, participative management at its best, and prudent college administrators cannot afford to ignore its potential.

Overcoming Administrative Resistance

Some administrators may fear the participative element in quality circles, because the pitfalls of quality circles seem to be known by most experienced and perceptive executives. It is important to note the circle does not usurp management prerogatives. In the facilitator training programs the following four points are stressed:

1. Each circle solves problems only in its own work area.
   The circle in the maintenance department does not solve problems in custodial services, and vice versa.

2. Circles do not work on contract-related problems.
   Contracted working conditions, for example, are not an issue for a circle to address.

3. Circles make recommendations, not final decisions.
4. Decision making continues to be the prerogative of those with the responsibility.

It is true, however, that industrial circles have experienced more than an 80% implementation success. This is because the circles make recommendations which benefit the company. A "quality" recommendation, accepted by management builds the quality circle program's credibility. 10

Knowing that a well-researched, well-documented solution will receive full consideration, the circle members work all the harder to find "best" answers that will produce desired results — quality education for all students.

**Target Groups**

Given the fairly sophisticated structures in place on most college campuses for faculty and administrator input and communication and the relative dearth of such options for other college employees, it would seem that quality circles might be best utilized initially for classified, maintenance, and custodial staffs. These employees constitute an invaluable part of the college operation, and yet too often have been an untapped resource. Possessing specialized skills and experience and a perspective different from professional staff, these members of the college family can offer suggestions and recommendations that will assist the administration in reducing utility and operational costs, improving efficiency, and protecting college property. In these times of inflation, dwindling resources, and stabilizing enrollments, the community college administrator must consider every legitimate source of information and assistance in his efforts to provide quality leadership.

College employees can feel good about participating, because they can identify problems important to them. They can be recognized as experts in their speciality, and they can recommend problem solutions to management.
They can grow personally and professionally through the process, and they can contribute to the college's quality reputation. Morale improves commensurately, and the organization benefits directly.

Summary

The quality circle concept was introduced in the 1950s in America, was exported to Japan in the 1960s, and was reintroduced into American management in the 1970s. The concept has enjoyed widespread acceptance and success in Japan, and its future in American business, industry, and higher education is bright. More than 200 major American companies now use quality circles to assist management, and that number will undoubtedly increase. Because of its emphasis on the individual employee and his hopes, abilities, and experiences, the concept seems to be appropriate for the higher education setting. This is particularly true in the community colleges which focus on responsive service to students and the community and emphasize a supportive learning environment for all. Given the current economic environment and the pressure to compete for students and resources of all kinds, college administrators must look to new and different ways to solve problems, to maximize operational effectiveness and employee morale, and to lead their institutions. The quality circle concept provides them with one effective option to meet these needs.

Community college administrators have much to learn from their counterparts in management. Managers in business and industry increasingly demand responsibility and efficiency from their employees, all the way down to the least skilled and most inexperienced blue-collar worker on the factory floor. Management in the business-industrial sector is putting to work the tremendous improvement in the education and skill level of the labor force that has been accomplished in this century. Employees are being convened
once or twice a month in organizations across the country, to address the question: "What can we do to improve what we already are doing?"

That question is pertinent at all levels in American business and industry, and the answers being provided by employees are helping to reduce costs and to improve productivity and efficiency. The same question is pertinent in the community college setting, and the answers provided by college employees will be just as beneficial to the college as they have been to business and industry.

Perhaps the most powerful message to all managers regarding quality circles is that an organization can realize the full potential of its employees only if it invests in their training and then shares with them the power to influence decisions. Without adequate training, the opportunity to participate in decision making leads only to frustration and conflict. Without the sharing of decision-making power, the investment in training is wasteful and frustrating.  

Both of these conditions require the support and commitment of the upper levels of college management and the long-term incentives that are necessary to insure the cooperation and support of all institutional employees. With this commitment and support, quality circles can be an invaluable part of the organization.

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Footnotes


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