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Designing and Implementing Participative Management Within The Corporate Sector: A Primer

Robert R. Appel

DESIGNING AND IMPLEMENTING
PARTICIPATIVE MANAGEMENT WITHIN
THE CORPORATE SECTOR: A PRIMER

Robert R. Appel, M.S.

A Culminating Project Presented to the Faculty of the
Graduate School of Lindenwood College in Partial
Fulfillment of the Requirements for the
Degree of Master of Business Administration

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ABSTRACT

The focus of this thesis is the study of
participative management, in particular the use of
quality circles in the corporate sector. After
thoroughly researching the information available on
quality circles there will be developed a manual to be
utilized to provide information to the managers and
potential circle members of a company preparing to
implement quality circles.

Research has shown that over fifty percent of the
quality circle programs implemented in the United States
failed. One of the major causes of this failure rate is
the lack of information provided to the employees
concerning quality circles.

After a complete investigation of the information
available concerning participative management and quality
circles a manual was developed. This manual would be
utilized during the introduction of a quality circle
program in a small business.

Once the manual was developed a group of four
business people were selected to review the manual. To

assist in this review a questionnaire was developed.
After the questionaire was answered, the information was
tabulated and any additional information needed from the
group was achieved through follow up phone calls with the
people in the group.

Results of the evaluation by the group provide
additional suggestions concerning the manual. These
suggestions were incorporated into the manual.

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Chapter I

INTRODUCTION

Early Management

The first form of management was created in
prehistoric time, as people joined together in groups or
tribes, to facilitate the division of labor. These
groups needed a leader or manager. These leaders would
manage the groups with the input of others in the group
(Koontz, 4).

The study of five thousand year old documents has
given us evidence of management in ancient times. One of
the greatest managerial undertakings was the building of
the pyramids in Egypt. The construction of these
structures has been estimated to have taken twenty years
and the labor of over one hundred thousand workers. To
achieve this the Egyptians had to employ managerial
functions such as planning, and organizing (George, Jr. 4-
7)

The Grecian scholars have provided us with the
largest amount of documentation concerning management
thought during ancient times. In their culture we find
the origin of the scientific method, which had an

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influence on the development of scientific management.
Scholars such as Socrates and Plato developed principles
of management which are very similar to those of modern
management. An example of one of these principles was
their understanding that ".... maximum output is achieved
through the use of uniform methods at stipulated
tempos." For hard repetitive work, the task was set to
music with the flute and pipe governing the movements.
One of the innovations of Greece was the development of
the polis, which was a form of government that encouraged
the free exchange of ideas as well as open discussions of
the problems (14-17).

In medieval times, one form of management was the
feudal organization. This organization was a layered
form of management with descending grades of authority.
The King or emperor was the manager, he delegated
authority to those beneath him. Each layer of management
ruled it's area as they saw fit. This delegation of
authority moved to the lowest level manager which was the
Knight. Each layer of management had to pay tribute to
the layer above it for the authority to rule. This is
one of the first examples of decentralization and
delegation of authority (27-29).

One of the most progressive examples of management during the sixteenth century was the arsenal of Venice. Venice relied heavily upon their shipping for protection. To insure the availability of necessary ships they established a shipyard which covered sixty acres of ground and water. At its peak of activity, the shipyard employed a total of two thousand workers and managers. To control this industry they developed various management practices which were innovative for the times. They established personnel practices covering wages, quality standards, employee selection, wage review and wine breaks for the employees. An inventory, cost control, and accounting system were developed. An assembly line was utilized for outfitting the galleys (33-39). However, as innovative as these ideas were, most were not adopted by others in management until much later in history, in fact, it wasn't until the twentieth century that the beverage break was reintroduced (Vecchio 12-13).

In the seventeen hundreds, the industrial revolution brought about the change from a rural system of small craftsman to the industrial factory system. Management was characterized by strict control of the worker, with

piece work being the major incentive used to make the worker perform. During this time, planning in the areas of plant location and pay back were developed. There was also emerged some instances of scientific management. The first examples of these were documented at Soho Engineering Foundry in Boulton, England. Scientific methods of problem solving were utilized to develop operating plans for the business. The production processes were established on the basis of man and machinery after careful study of each. When setting up a production process, management calculated the speeds of the machine and adjusted these speeds to the work being performed. Each phase of the process was broken down into individual tasks which made up the total operation and each worker had a standardized task to perform (George 49-59).

The nineteenth century revealed a wealth of writing with respect to the functions of management. Of the five recognized functions (planning, organizing, staffing, directing, and controlling), most theorist felt that planning was the most important. Time motion studies were first developed during this period, while piece work was still considered the preferred means of

controlling low labor productivity. However, some
researchers were starting to express concerns over the
affect that piece work had on the worker. For example,
Adam Smith, was concerned that "Workmen..., when they are
liberally paid by the piece, are very apt to overwork
themselves, and to ruin their health and constitution in
a few years" (64-70).

Scientific Management

In the late eighteen hundreds and early nineteen
hundreds, modern management thought began to be defined.
Although most students of management consider Frederick
W. Taylor "the father of scientific management", the idea
was first developed by Henry R. Towne in eighteen eighty
six (Haynes 5-6). In Towne's address to The American
Society of Mechanical Engineers he stressed, that in
order to manage, a person must have good executive
abilities and a practical knowledge of the goods produced
and processes involved. The manager also must have the
ability to, "...observe, record, analyze and compare
essential facts in relation to wages, supplies, expense
accounts, and all else that enters into or affects the
economy of production and the cost of the product"

(Merrill, Towne 58-64). Towne stressed that shop management was as important as engineering management and that there was a need to recognize the "...science of management with its own literature, journals, and associations" (George 80-81). He also called for the sharing of this management knowledge through the utilization of an organization such as the society he was addressing (Merril, Towne 58-64).

Taylor, who is considered by some to be the most influential of the management pioneers, took the idea of a "science of management" put forth by Towne and developed it into what is presently considered scientific management. Taylor emphasized that scientific management was not just an accumulation of procedures, but was a mental revolution that had to take place in management as well as in labor. In his address to the "Special Committee of the House of Representatives to Investigate the Taylor and Other systems of Shop Management", he said:

> Now, in essence, scientific management involves a complete mental revolution on the part of the workingman engaged in any particular establishment or industry-a complete mental revolution on the part of these men as to their duties toward their work, towards their fellow men, and towards their employers. And it

> involves the equally complete mental revolution
> on the part of those on the management's side-
> the foreman, the superintendent, the owner of
> the business, the board of directors-a complete
> mental revolution on their part as to their
> duties toward their fellow workers in the
> management, toward their workmen, and toward
> all of their daily problems. And without this
> complete mental revolution on both sides
> scientific management does not exist.(78)

Taylor felt that this mental revolution could eliminate

the item causing the greatest problem between labor and

management. This item was the division of the money left

over after all cost were paid except labor and profits,

which he referred to as the surplus of the business. He

contended that by bringing about this mental revolution

through the utilization of the principles of scientific

management, this surplus could be increased to such an

extent that it would no longer be a problem. One other

point which was consistent through out his work was the

theme that any application of the system had to be

beneficial to both management and labor in order to work

(79-81).

Scientific management consist of four general areas

of emphasis:

1.   Utilizing scientific methods to determine the basic elements of a worker's job. For example, if a worker is shoveling coal into a bin, the tasks which make up the operation would be loading the coal onto the shovel, lifting the coal, and emptying the coal into the bin. Once the individual tasks are identified for the operation the best methods of doing these task are developed. These could address such items as the size of the shovel, the size of the bin, or the method of lifting the shovel full of coal.

2.   Inspire the workers to embrace and utilize these developed methods. Explain to the workers how these methods will help them in performing their job. Show them what others have accomplished through the utilization of these methods. In the coal example, the worker would be shown the results which are being achieved with the developed methods as compared to the results which were achieved before the new methods were developed. By showing the increased productivity the worker would be inspired to embrace these new methods.

3. Select and train the workers so they can achieve their best and work in a job that is more interesting and profitable than their previous job. Once the job tasks have been identified, the workers who are best suited,

are selected to achieve these tasks. For example, the worker would be given the correct shovel and shown the procedure for handling the coal. The worker's progress would be followed to insure that the worker can do the job and is doing it by the prescribed methods.

4. Divide the work between labor and management with each doing the duties they are best fitted to do. In the coal example, it is the responsibility of the worker to shovel the coal, it is the responsibility of management to insure that the worker has the proper shovel and knows the correct procedure (Haynes 6, Merril,Taylor 82-113).

Taylor emphasized a systematic approach to management in which both labor and management shared in benefits from its utilization. He believed that labor not working to their fullest abilities was the fault of management and not the worker. Taylor believed that management/labor communications was essential to increase productivity, he believed that management needed to explain the benefits of increased productivity to labor (Merril,Taylor 82-83).

While Taylor did address some of the human aspects of the worker, there were others who, while embracing his ideas, placed more emphasis on the workers. One of these

was Henry Gantt. His contributions to management focused on a humanistic approach. He developed:

1. The Gantt Chart which is a line chart used to show the amount of time needed to perform an activity.

2. The task and bonus plan which was a modification of Taylor's piece work plan. Under Gantt's plan the worker was given a days wage for working, a bonus if he achieved standard, and piece work if he exceeded standard. For example, if shoveling one hundred pounds of coal was the standard, a person would be paid a days wages if he shoveled less then one hundred pounds of coal. If one hundred pounds of coal were shoveled, the worker would receive the day's wages plus a bonus. If more than one hundred pounds of coal were handled, pay would be based on piece work, which would exceed the day wage plus bonus pay for achieving standard. The use of this plan and the results from it convinced Gantt of the importance of concern for the worker and morale.

3. The policy of instructing workers rather than driving them. Emphasized the responsibility of management in the development of the worker to become more skilled, reliable, and form better work habits. Rather than assigning employees to do a job and then driving them to complete the task, management would now explain to the

employees how to do the job correctly and the reasons for same.

4. A plan to encourage companies to place more emphasis on service rather than profits. Gantt felt that the only way the business system could survive was if service was emphasized over profits (George 100-102). According to Gantt, the businessman "...has forgotten that his business system had its foundation in service, and as far as the community is concerned has no reason for existence except the service it can render" (Wren 157).

Frank and Lilian Gilbreth supported Gantt's humanistic theory to some degree. The Gilbreth's were a husband-wife team with a unique combination; he was an engineer and she was a psychologist. While a lot of their work was in motion studies, they did emphasize the importance of the worker. Both were interested in developing the total man through effective training and improvement of the work environment (George 96-99). One of the most important conclusions to come from their studies was, "...that it is not the monotony of work that causes so much worker dissatisfaction, but rather management's lack of interest in workers" (Koontz 30).

Modern Management Thought

Henri Fayol is considered the father of modern management thought. While Taylor in his studies dealt with the problem of management from the worker up, Fayol dealt with the problem from the top down. He viewed management as a theory which could be taught, and emphasized the five components which make up the management activity. These are:

1. Planning, the examination of the future and the development of ways to address it. This includes the long and short term planning done by the business.

2. Organizing, the building of the structure to achieve your plans. This includes both the organizing of the work force and the physical structures of the business.

3. Commanding, the direction of personnel in the organization. This is the direct management of the employees of the business.

4. Coordinating, the organizing of all of the necessary activities of the business. This is the management of the business activities, the bringing together of all of the activities of the business.

5. Controlling, the insuring that all of the goals of the organization are accomplished. This is the insuring that the planning which has taken place is achieved (30-32).

Along with these components of management, Fayol developed fourteen principles which he felt should be the foundation of any management system. While he emphasized his fourteen principles, he did not consider them a rule or law. He felt they should be utilized as guides for the development of management theories. Fayol, felt that there could be an unlimited number of principles, so long as each enhanced the ability of the manager to manage (Wren 216-220).

The behavioral science approach to management was also emerging during the time of Taylor and Fayol. Under this school of thought it was felt that since managers had to act through people, the study of management should be centered on the study of people and their interpersonal relationships. With the emergence of this approach to management, the social sciences became involved with the business sector. The work in this area was done from two different perspectives. Some researchers approached their study from the individual aspect, taking a psychological approach to their

studies. Others approached their study from the group aspect, taking a sociological approach to their study (George,Jr. 141-142).

One of the major influences on the behavioral science approach to management was the Hawthorne Studies conducted at a Western Electric plant in a Chicago suburb. The original research was established to evaluate the cause and effect relationship between productivity and changes in the plant environment. In one experiment the lighting of the work area was varied. The research project was almost canceled when it was found that, no matter how the lighting in the area was varied the productivity increased. However, George E. Mayo, realizing that something was influencing the results of this study, continued his research (34-35). Additional studies showed that the emotional factors have more effect on the productivity than physical factors. One of Mayo's most important conclusions was that, "...of all the human factors influencing employee behavior the most powerful were those emanating from the worker's participation in social groups". He concluded that management must address the social aspect of the worker

as well as the productivity aspect to be effective
(George, Jr. 129).

Present Day Management Thought

In the past forty years there has developed an
abundance of ideas concerning the management of an
organization. In the 1950's, one of the most popular
management concepts was management by objectives (MBO's).
Defined as: "A comprehensive managerial system that
integrates many key managerial activities in a systematic
manner, and is consciously directed toward the effective
and efficient achievement of organizational and
individual objectives" (Koontz 87). The basic element of
the program was the development of objectives by each
layer of management over a specific time frame. The
results would be reviewed periodically, and the
objectives updated. In order for the program to work, it
had to be a total management system and not an additional
management task. (88-89)

In the 1960's, Douglas McGregor introduced his
assumptions known as Theory X and Y. According to
McGregor, a manager could assume that his workers were
either theory X or Y employees and manage them

accordingly. The theory X employees were those who didn't like work and would avoid it if possible.   A manager that assumed the employees were this type would be very autocratic, directing and watching the employees at all times. This manager would rely on the threat of discipline to achieve the desired results. The theory Y employees were those who liked to work and are committed to doing a good job. A manager who believes the employees are this type would be supportive as opposed to autocratic. The employees would be motivated through praise and reward. The manager would trust them to do a good job. Presently, most managers feel that employees are theory Y and utilize positive motivation to get them to do their job (Koontz 395-397).

The 1980's brought the introduction of The One Minute Manager. A book by Kenneth Blanchard, Ph.D. and Spencer Johnson, M.D. that introduced this concept of management. Their idea was based on management by objectives and behavior modification of employees. The key elements of the system are goal setting, praise, and reprimands. Each of these was to be done between the manager and subordinate through one minute discussions. The two major drawbacks to the system are, the appearance of child like treatment of the employee and the feeling

the employees get that the managers do not want to take
the time to deal with them (McGill 25).

One of the concepts of management being emphasized
today is participative management. Under this concept
the employees are involved in the management of the
company. This participation can range from an informal
system of suggestions to the utilization of workers to
handle management functions such as hiring and product
development (Muczyk 52). The importance of employee
participation is not a new concept. For example, in the
1930s, during the human relations movement, Elton Mayo
thought that management should form small groups of
employees to provide the face to face association that
employees needed (Haynes 9). And with Taylor's system of
scientific management, emphasis was placed on employee
participation. Taylor, while discussing scientific
management before a Committee of the House of
Representatives, emphasized that if, employees felt they
had a better method of doing a task, management should
evaluate the method and institute it if it was indeed
better. (Merril, Taylor 113). A form of participative
management that has developed in the past forty years is
the quality control circle.

A quality control circle or quality circle (QC) is a small group of people working together to solve problems in the work place. The QC approach to management was popular in Japan. After World War II, "Made in Japan" was another way of calling an item cheap or of poor quality. The Japanese business community realized that if they wanted to become a world economic power, they had to increase their level of product quality. One of the ways the Japanese chose to address this problem of product quality was through the formation of quality control circles. Since its inception "circles" have been used extensively in Japan as an integral part of the management system. They are no longer solely used for quality problems, but address productivity problems of all types in areas other than manufacturing (Crocker 11). The first circles were introduced in this country in the 1970's. Since that time there has been some acceptance of the circle concept, but not to the extent of acceptance in Japan (27-29).

A quality control circle is a group of employees, usually from the same work area that meet on a regular basis to address the problems of the work place. Membership in these groups is usually voluntary with a leader who is usually a member of management. The groups

select problems in their work area that they want to address and develop solutions to these problems. Once they have come up with a solution they present it to management which has the responsibility to accept or reject the solution. If the solution is accepted, the circle may be instrumental in the implementation of the solution. The circle then continues on to consider another problem (3-10)

The competition from the Japanese has provided this nation one of the greatest challenges it has ever faced. One of the key ingredients to their management style is the participative aspect and the utilization of Quality Circles. However, during the 1980's, 75% of the participative management programs sponsored in the United States failed (McGill 73). One reason for failure was a fear of the program brought on by misunderstanding of the circle concept. However, research reveals that this fear can be alleviated through training and education (Hayne 9).

Statement of Purpose

The purpose of this research is to evaluate the

information available concerning quality circles, their concept, implementation and use. From this information a manual will be developed to be used as an initial primer to provide information concerning quality circles. This primer will attempt to provide to the managers and employees the information they need to understand quality circles, their structure, concept, and how they work. The primer will be directed towards a small business with an employee base of seventy five to one hundred and fifty employees. It will be written in such a manner that the management of the business can utilize the manual in the development of a quality circle program through the utilization of their own management staff.

Chapter II

LITERATURE REVIEW

Historical Background

The idea of employee participation was first
developed at the turn of the century. The seeds of
participative management were planted by Frederick W.
Taylor while developing his theory of scientific
management. One of the main points he emphasized was
the need to develop a spirit of cooperation between
management and labor. He felt that if management and
labor worked together as a team, they could achieve
more than they would working individually (George 94).

In the 1930's, during the human relations
movement, employee participation was emphasized.
Subordinates were encouraged to provide suggestions and
to participate on committees set up to make decisions.
Kurt Lewin and his associates concluded from their
studies, "...that 'democratic' groups, in which there
was active member participation in decision making,

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were more productive both of human satisfaction and of achievement of the groups objective" (Haynes 8-9).

Toward the end of the 1960's, the participation movement was advocated from the perspective that ideas needed to flow from the bottom of the organization as well as from the top. The reasoning behind this movement included such assumptions as:

1. The joint effort in decision making gives a sense of ownership, even if some of the participants ideas are not accepted. By having input into the decisions, the participants feel they have a chance to influence the final outcome.

2. Since the participants were involved in the decision from the beginning, they have a better understanding of what was developed.

3. Because the members of the groups have a feeling of ownership toward the ideas, they are more apt to become committed to the changes developing from these groups.

4. As the members of the group learn to work together, they develop a respect for each other.

5. The employees enjoy the association of the group and need the feedback they get from it.

6.   The employees all have something to add to the
group decisions and enjoy being a part of the decision
making process.

There are some people who feel that the group decisions
are not as good as those of a forceful individual.
However, these assumptions are difficult to challenge
and lend support to the idea of group decision making
(Haynes 114-115).

Over the past three decades, Professor Rensis
Likert and his associates at the University of Michigan
have studied various styles of management.   Likert
sees an effective manager as one who is people oriented
and keeps the group working together through effective
communication.   To clarify his ideas, Likert has
suggested that there are four different types of
management which he refers to as systems (Koontz 442-
443).

His first system of management is the "explorative-
authoritative" and involves no participation at all.
Under this type of management the decisions are made at
the top and communications are from the top down.   This
is an autocratic style of management, in which the
employees are not trusted and the major motivators are
fear and punishment (442-443).

Under the "benevolent-authoritative", which is his second system of management, there is some participation; with subordinates being solicited for ideas. Some delegation of decisions making is utilized, but it is controlled by upper management. The manager has a limited amount of trust in the subordinates. Reward is used to some extent for motivation, but fear and punishment are also a part of the system (442-443).

His third system of management labeled "consultative", has increased employee participation. The manager has a great deal of trust in the subordinates, and attempts to utilize their input. Communications are in both directions, with decisions being made at a lower level following broad guidelines developed by upper management. Reward is the major motivating factor with limited use of punishment (442-443).

Likert's fourth system of management is the "participative-group". Under this system, the manager has total trust in the subordinates. Input is actively sought from the employees in the decision and goals setting process, with communication moving in both

directions. Motivation is totally based upon reward (442-443).

In his studies Likert found that companies utilizing the system 4 approach to management were the most effective in setting and achieving goals. They also were more productive than companies which used the other systems of management. He attributed this to the participative aspect of the management style. A quality control circle is one method of management which could be utilized by a company that wanted to establish a system 4 type of management system (Koontz 442-443).

The idea behind quality control circles was conceived by two American Consultants in Japan after World War II (Shea 33). Dr. Edward Deming and Dr. J. M. Juran are given credit for the implementation of the Theory Z management style and the quality control circle approach to management being utilized in Japan today. In 1950, at a quality control seminar in Japan, Dr. Deming emphasized the need to analyze the work routines being utilized by the Japanese in an attempt to eliminate the quality problems which plagued their industry. Realizing that the work could not be done by management alone, a framework was established to allow

the workers to share in this evaluation process. This frame work, established the present approach to quality control circles and actively involved the workers in the identification and solution of problems (Herkimer 34-35).

Circles in Japan were originally established to address problems affecting the quality of the product being produced. Circles have since been expanded to address any problems effecting the productivity of the business (34-35). The circles are based on two assumptions. The first being that, workers at the lowest level have hands on knowledge of the problems effecting them and their job. Because of this, they are in the best position to develop solutions to correct these problems. The second assumption is that the workers are creative. This creativity can be developed and the workers trained to utilize their knowledge and creativity to develop solutions to problems in the workplace. In Japan, these circles are more than just a group of people being utilized to correct problems. They are a people-building experience, which makes the workers an active participant in the decision making process effecting their work situation (Crocker 6-10).

The characteristics of a typical Japanese quality control circle are a group of three to twenty participants from the same work area that meet once a week. The ideal number for the group would be eight to ten people. This number would give sufficient members to produce valid ideas, yet would be small enough to be manageable. Membership in these groups would be voluntary (11-25).

The group would have a leader either assigned by management or elected by the group, depending upon the development of the program. This leadership position would be consultative as opposed to an authoritative role. It is the leader's responsibility to assist the members in their identification of problems and the development of solutions through the use of interpersonal skills (11-25).

In a typical Japanese company the circles would be supported by a company wide quality circle committee. The committee would direct the overall management of the quality circle program, its leader being an upper manager. There would also be a committee to promote the use of circles throughout the company. Advisors and trainers would be available to support the circles during their initial development and on going work.

The structure in Japan is some what different from that which has developed in the United States (11-25).

In the United States there has been participative management systems since the nineteen forties. One of the first companies to actively seek employee participation was the Disney Company. Walt Disney, "... used to call wives and children of his employees weekly just to meet and talk with them. He would say 'I get good, useful ideas from children and mothers'" (Ingle 6).

In the late 1950's a program which had the same basic ideas and philosophy as quality circles was developed by Sidney Rubenstein. His program was implemented into a number of small companies with successful results that included increased quality, productivity, and communications (Ingle 6-8).

The first quality circles were established in the United States in nineteen seventy four at the Lockheed Missile & Space Company in Sunnyvale, California and the Honeywell Corporation. Both of these companies developed their programs based on the style of Japanese circles. However, the typical circle system in the United States differs from those in Japan (Ingle 6-8).

Structure of Quality Circles

Circles in the United States consists of a
steering committee, which sets the policies and
procedures for the program; a facilitator, which is a
liaison between the leader of the circles and the
steering committee; and the circles, made up of
volunteer members and a leader which is appointed or
elected (Crocker 33-36).

The steering committee should be made up of a
cross section of the company with five to fifteen
volunteer members. This cross section should include a
member of management from the highest level such as a
plant manager or president. By doing this the
committee can be a decision making group. This person
must understand the function of the group, and not be
an autocratic manager. The membership should also
include people from all management levels and
disciplines. For example, in a plant situation which
has three levels of management, the management
representatives would include the plant manager; middle
managers such as human resources manager, operations
manager, purchasing manager, technical specialist; and
various representatives from the supervisory force
(Hutchins 170-173).

The worker or union should also be represented on this committee. If the plant is non union, this representation would be accomplished by selecting front line workers from various departments. If the employees were unionized, the representation would be accomplished by inviting a union executive and/or a union steward from the plant. These people would be full members of the committee and have the same rights and powers as other members. One of the important aspects of including the worker and/or union in the membership of a steering committee is to develop a source of ownership for the program. By being involved in the initial development of the program the employees will be more receptive to the development of circles (172-173).

Once the committee has been set up and trained in the workings of quality circles they will establish the goals and objectives of the program. This is a policy making group, they are not involved in the day to day activities of the circles. They would address such areas as the number of circles, the implementation procedures, training needs, use of a consultant, selection for membership, guidelines for reporting, implementation, and promotion of the program. They

would also have an on going activity of overseeing the development of the quality circle concept. It is very important that this committee is established and developed to insure that the program doesn't falter. In this continuing activity it will be the responsibility of the facilitator to act as a liaison between the committee and the various circles (Crocker 78-79).

One of the first items to be handled by the steering committee is the acceptance of a facilitator. This person will be a member of the committee with reporting responsibility to an upper level management person, usually the director of manufacturing or plant manager. If the plant or company is large enough, approximately 120 people, this should be a full time position. If it is part time, it should be understood that the facilitator position takes priority over other duties (Dewar 141-157).

The facilitator provides support to the circles from inception through the various stages of development. During the initiation stage of the circle process the facilitator has to actively promote the program and convince people to be involved. This person is also responsible for training the leaders and

assisting the leaders in the training of circle members. As the circles are developing, the facilitator will monitor the circles following their progress, acting in a support function. It is also important that the facilitator acts as a cheerleader for the individual circles and the program in general. Once the circle has matured the duties of the facilitator are still supportive, with most of the work being monitoring the progress and consulting with the circles as needed (Ingle 50-59).

One of the important functions of this position is to keep track of the circles and their progress. This should be done through attending various meetings and helping as necessary. The facilitator should insure that the circles have collected sufficient information before making any proposals to management. They should also assist the circles in the presentation to management, insuring that all the necessary information is provided. Once the presentation has been made it is the facilitator's responsibility to follow up on the implementation and report the effects back to the circle. This information can also be utilized to promote the circle program (50-59).

Facilitators also act as trainers in the activities related to quality circles. During the set-up of the program they will be training the leaders and assisting in the training of circle members. There will also be on going training of the established circles and the implementation of any new procedures which are developed (50-59).

One of the major functions of the facilitator will be working with circle leaders. When the circles are initially established, the leader is usually a front line supervisor appointed by upper management. As the program develops, this position may be filled by any of the circle members through consensus of the membership. There are two main objectives of a circle leader; the first being to act as a source bank for the circle, to advise, train, and develop the members of the group. The second, is to insure that all members of the group participate in the activities of the circle (Hutchins 145-153).

The responsibilities of the leader include both humanistic and structural responsibilities. The humanistic responsibilities deal with the attitude of the members with the key one being to keep the

membership enthusiastic about the program. Some other duties related to this would be creating a spirit of harmony and coordination among the membership, enforcing a code of conduct, and teaching the members methods to better themselves. The structural responsibilities would deal with the functioning of the circle such as the operations of the circle, being responsible for circle records, seeing that the members carry out their assignments and conducting the meetings (Ingle 44-47).

The circle leaders should be trained by the facilitator (Dewer 174-175). The training should build on the skills of the leader and enhance their ability to do the job (Hutchins 145-153). It should emphasize development of the circle members through human resources management and team building training; also time should be spent explaining the company's culture and the goals of the organization. The final emphasis should be on the leadership skills needed for conducting the meetings, as well as the necessary statistical procedures which will be needed. At this time the leaders would also be shown how the circles work and the various methods that they employ (Crocker 76-77).

One thing the leaders must keep foremost in their mind is that the circle members are the key to the success of any program (Ingle 46-47). Because of this, it is very important that the employees are properly selected and trained for membership in any circle. Membership to the circles should be open to everyone in the area for which the circle is being formed. Those who are interested should be invited to an information seminar and presented with the responsibilities and opportunities of membership. They should not decide to join a circle until they have been given and understand this information (Dewar 183-190).

Once the circle has been formed the members are trained by the circle leader. In this training one of two methods can be followed. The first is to give the membership training in all aspects of the program and let them proceed with their project. The second, which is considered the most effective, is to give a general overview of the program and then provide the specific training as needed for the circle to function (183-190). This training should cover the interpersonal skills such as team building and people development; as well as the technical skills such as brain storming, statistics, and graphing (Crocker 73-74).

Upon completion of training the members will identify problems in their work area utilizing this training. They then select a problem and develop a solution. Once they have the necessary data, a presentation for management is developed identifying the situation they investigated and proposing a solution to be instituted by management. It is the responsibility of management to correct the problem or explain why they will not institute the proposed solution (Mohr 72-74).

Attributes of a Successful Program

The successful programs developed in the United States have certain attributes in common. One of the most important of these is the culture of the company. The greatest success of circles has been achieved when the circle program was an extension of existing management style. The company should believe in employee participation (Ambler 829-831), and realize that their most valuable resource is the people who work for them (London 23-26). The circle should be tailored to fit the particular company, its culture, and the people who work for the company (Ambler 829-831). According to Allen Schumer of Miller Brewing

Company, "...it's necessary that employee involvement be an evolutionary process, an on-going part of the corporate culture and corporate environment" (Schumer 563-566).

Along with the proper company culture there has to be the support of management for the program. This support has to start at the top and disseminate through all levels of management (Mohr 234-240). In his article concerning quality circles at Lake Financial Corporation, Pati stated:

> The philosophy, program and objectives must
> be created and articulated by the president,
> chairman or CEO. It is important for the
> invitation to come from the top and not from
> human relations because most employees are
> most comfortable with a top-down management
> style. Ironically for the success of the
> program's bottom-up philosophy, it has to
> start from the top (Pati 83).

It has to be an active support with words, actions, as well as the necessary resources and moneys (Mohr 234-240). One of the most important aspects of this support is that management has a realistic expectation of what the circles can do for the company and the time it will take to achieve these expectations (Ambler 829-831).

One form of management support is the training
which is provided to management and employees
participating in the program. A basic premise of
quality circles is that the employees have the ability
to solve work place problems, if they are provided with
the training to do so. By providing the necessary
training, management is showing respect to the
employees and faith in their ability to grow with the
program (Mohr 234-240).

This training is a part of the people-building
aspect of quality circles which is another attribute of
successful programs. One of the most important aspects
of the quality circle philosophy is that the program
should build the self esteem of the participants (234-
240). According to Leonard Cornell, president of
Cornell and Associates:

> Circles are a way of changing people's
> attitudes, teaching them to think creatively
> and communicate effectively. "People
> growing" is basic to its success, and this
> depends upon expertise in training and
> understanding the problems and pitfalls of
> the concept (Cornell 93).

As circles identify and correct problems effecting
their work area, the members develop in both their
personal and professional life. This success is the
type of self motivation which will lead to a higher
level of commitment to one's job (Mohr 234-240).

Tied closely to the people building aspect of the
program is the sense of team spirit which must develop
in the circles to insure success. By developing this
team work the workers go from their individualistic
stance, which is common with the American Worker, to an
attitude of cooperative interdependence (Mohr 234-240).
Landon, a senior facilitator, and Moulton, a circle
leader; state in their article concerning quality
circles at Lockheed California Company:

>   Most American endeavors are of an individual
>   nature. The pioneer spirit of which we are
>   justly proud, emphasized the rugged
>   individual. However, today the work force
>   finds that to accomplish company goals and
>   conduct work activities as currently
>   structured in most industries, teamwork is
>   essential (Landon 26)

The workers learn to get their reward from the success of the team as opposed to looking for individual rewards. This allows the worker to strive for the good of the whole area instead of looking out for their individualistic good. By so doing there is a development of trust among the workers and a feeling of being a team member. This trust which develops in fellow workers can be fostered into a trust in the company and its goals (Mohr 234-240).

One of the things which helps to develop this team spirit and insure success of the program, is the requirement that participation be voluntary (234-240). The recent article by Gopal Pati, states about Lake Financial:

> The company soon discovered it is very
> important for each member to join
> voluntarily. Industrial and government
> leadership must realize that not everyone
> needs or wants to participate in company
> policy planning or problem solving (Pati 85).

Because the quality circles are voluntary, the employees sense that it is something which will be advantageous to them and not just for the good of management. It insures that those involved in the program want to be a member. Because of this they take an active interest in their training and the functioning of the circle (Mohr 234-240).

To insure that the employees retain this interest and operate a successful program, it is very important that management allow the circle to do their own problem selection. There can be guidelines to control this selection process and some situations could be considered off limits. An example of this would be areas handled under a union bargaining agreement. But overall, the choice of problem to be addressed is to be decided by a consensus opinion of the circle. This insures the membership will look at problems that are important to them, thus giving them more of an incentive to develop a solution (234-240).

Once these solutions are developed, it is very important that the successes be recognized. Denhardt, the Chair of the Governor's Advisory Council on Productivity for the State of Missouri, expressed the following in a recent article:

> A major part of a successful quality-circle program is recognition for circle members, leaders, facilitators, and middle managers. Recognition for the circle is provided in the form of presentations to managers, visits from the department director to circle meetings, letters from directors to the circle following a successful presentation, and articles in the productivity newsletter about a circle's project (Denhardt 308).

This recognition will stimulate interest from others who are not involved with circles, as well as, develop a sense of pride in those active in the circle movement. The recognition received is a very important aspect of the program (308).

Although all of these items don't have to be present to insure a successful program, it has been found that the successful programs have many of these in common (Mohr 234-240).

Causes of Quality Circle Failure

Studies in the early eighties showed that of all the
circles started in this country over fifty percent
failed. While some of these failures had little impact
on the business, some were very costly in terms of
damage to the labor-management relations of the
company. Some people have been tempted to conclude
these failures were because: American management lacks
the necessary skills and overall philosophy to make
these circles work; quality circles are not applicable
in this country; the American worker isn't capable of
working within the frame work of the circle movement.
In a recent Personnel Journal article, Ambler &
Overholts stated:

> The fact that many of the methods used within
> the Japanese model originated in the United
> States, and that numerous American businesses
> successfully utilized Japanese methods,
> including quality circles, test the validity
> of these tempting, but somewhat self-
> defeating conclusions (Ambler 829-831).

If failure can't be blamed on the aforementioned
reasons, then we must look elsewhere (829-831)

The results of most failure are directly related
to the handling of the program by management. One of
the most important aspects is the company culture. If
the company is autocratic, and doesn't believe in the

participation of employees, the program will be doomed
from the start. Before any company looks to implement
a program it must evaluate its culture and the
attitudes of management to insure that these are
conducive to a participative type program. If the
culture is wrong, the company should not plan to
institute the program until the attitude of the company
and its management is changed (829-831). According to
Allen Schumer, in his speech to the tenth annual Spring
Conference of the Association for Quality and
Participation: "... it's necessary that employee
involvement be an evolutionary process, an on-going
part of the corporate culture and corporate
environment" (Schumer 564).

Related to the company culture is the attitude of
managers and their commitment to the program. Their
attitude can be effected by two beliefs which are
directly opposite to the participation movement. The
first is the idea that only management has the
competence to make decisions and that the worker has
very little to offer the work place. The second idea
is that managers, because of their position of
authority, can be trusted to make decisions which are
best for the company; where as labor, because they are

only hired as a factor of production, cannot be trusted

to do what is best for the company. If management

carries these past attitudes into the establishment of

a quality circle program there is very little chance

that the program will succeed. It is very important

that before the establishment of any quality circle

program the attitudes of the management staff be

appraised to see if it is conducive to the

establishment of the program (Bradley 69-78)

Along with the ideas of management being a

potential problem, the attitude of middle managers can

have a dramatic effect on the success of circles. Some

middle managers have felt that the implementation of

quality circles will erode their authority. They need

to be shown that the activity will enhance their

ability to work with employees and ultimately bring

about the development of a team relationship between

employees and management (Ingle 198-207). McKinney, in

her work examining quality circles established in

various hospitals states:

    Hospitals report that gaining middle
    management support is a major problem in
    implementing quality circle programs....It is
    especially difficult for them to accept the
    idea that their employees, as quality circle
    participants, can identify and solve what
    used to be management problems. They worry

that they will lose their decision-making
authority and that the quality circles will
prove them to be ineffective and unnecessary
(McKinney 77).

These managers can also get the idea that circles will

create additional work with a minimum amount of

return. They need to be sold on the project before its

implementation, by understanding the potential for

success (Bradley 69-78).

Another attribute which can contribute to the

failure of quality circles is management's conception

of what the program is supposed to do. If they feel

the program is a quick fix for all of their existing

problems, their expectations will be far greater than

their results (Mohr 213-215). According to Charles

List in his Personnel Journal article:

> Unrealistic implementing demands have also
> sabotaged the best intentions of many quality
> circle programs...An organization must have a
> realistic understanding of the positive
> consequences from quality circles. It needs
> to know beforehand what it expects to derive,
> and accept a realistic time frame in which
> the quality circle can be expected to
> generate a return on investment (List 652).

Management needs to see circles as a people building
program which will help the workers develop in their
relationship with the company. When management
evaluates the program they should look at the
motivational aspects as well as the cost savings
developed by the program (Mohr 213-215).

A cause of failure directly related to management
is the training provided to the participants.
Inadequate training in the areas of group human
relations and/or statistical control/problem solving
can lead to failure of the program (Ingle 197-199). In
her article, in which she discusses the reason for the
failure of participative work groups, Vogt avows:
"Effective training is key to the success of work
groups" (Vogt 100). This training has to emphasis the
people building aspect of the program as well as the
practical application (Ingle 197-199).

Failure of quality circles can be brought about
because of problems with the members as well as
problems created by management. One potential problem
area is the expectations of the circle membership. If
members feel that circles will be a panacea for
correcting all of the problems of the job, frustration
will set in as they realize the limitations of the

program (Mohr 217-218). Mckinney, in her recent
article discussing quality circles states:

> After an initial "honeymoon stage" during
> which participants are enthusiastic about
> their new problem solving skills and
> opportunities to take part in decision
> making, many quality circle members become
> disenchanted with the slowness of the problem
> resolution process (McKinney 82-83).

One way to insure that the members expectations are
within the realm of the program is training that
emphasizes what can be accomplish with the program
(Mohr 217-218).

Another potential pitfall with circle members is
in the problem selection and solution area. There are
three mistakes which can be made. These are:
addressing a situation which is not within the realm of
the circle program, choosing a situation which is too
large in scope for the circle to handle, and having an
outside consultant force a solution on the circle.
These situations should be covered in the training and
watched for during the functioning of the circle (218-
219).

The leader and facilitator must be aware of the potential for the circle to stagnate. After a year or more the members may feel they have solved all of the available problems, at which time the program may become a chore rather than a challenge. If this happens the leadership must move the circle through this stagnation phase. There is no set procedure for doing this and each circle has to be handled as an individual case; but, with creative handling, the members can be challenged and the program can move forward (225-226).

Benefits of Circles

Successful circles which are developed and implemented into a company will provide a variety of benefits to the company, the management and employees. One of the greatest benefits to the employees is that they grow in their job and personal life (London 24-26). This is done by the training and opportunities given to the employee through the program (Mohn 183-195) According to David London and Steve Moulton, in their article concerning the circles established at Lockheed California:

> At Lockheed, circle leaders attend a four-day
> training seminar in which they are taught
> communications skills, group dynamics,
> problem-solving skills, creativity, conflict
> resolution and meeting techniques. This
> training has proven valuable to employees at
> all levels and by jointly experiencing the
> application of these techniques in the group
> setting, an exciting self-confidence develops
> as the value of the skills and their
> relevance to the workplace is discovered
> (London 24).

The circles provide to the members a number of

opportunities to achieve and be recognized for these

achievements, helping them to realize their importance

to the company. This growth helps to remove the

antagonistic labor-management relations which is

prevalent in many companies (Mohn 183-195).

Management of the company will also benefit from

the program. Many of their benefits are the same as

those which the employee experiences (Mohn 195-198).

In Personnel Journal, while discussing the benefits

realized by an east coast firm, Alexander states:

> After the program had been in effect for
> about two years, the manager of the training
> function observed that the supervisors who
> were quality circle leaders were
> significantly more self-assured,
> knowledgeable, and poised than other
> supervisors who were going through regular
> training programs (Alexander 54).

In addition, there is a change in the labor-management relationship. Because the employees become aware of the need for productivity, the manager and employee will start working together as a team pulling in the same direction instead of independent entities looking out for their own good. This team spirit gives the employees the perception that the managers care about them and the work they do (Mohn 195-198).

A result of the better working relations between employees and management is the increased communications which takes place. David London, a senior facilitator/leader training coordinator for employee participation circles, states in a recent article:

> One of the major, unexpected by products of the quality circle process is the greatly improved lateral communications. Not only do circle members open real channels of communication with other members, they subconsciously apply the circle principles to their activities outside circle meetings (London 24).

This increased communication is a benefit to
management and employees at work, as well as in their
personnel dealings outside of the work environment
(London 24).

One of the most important benefits to the
organization is the economic benefit it receives from a
properly run program (Bradley 69-81). Studies have
shown the break even point for circles which are
properly established to be between three to five
months. It has also been shown to have a pay back of
six to ten dollars for every dollar invested. However
there have also been studies to show a return of only
seventy cents for each dollar invested (Shea 38-39).
According to McKinney in her article in Hospital &
Health services Administration:

> ...Mount Sinai Hospital in Miami, Florida
> studied six of its 25 circles for one year.
> After considering the time of the circle
> members and the coordinator, the materials
> used in implementation, and overhead of 30 %,
> the hospital concluded that the six circles
> had generated net savings of about $183,000
> (McKinney 87).

In addition to the economic benefits there are the humanistic benefits such as improved employee relations, reduced absenteeism, improved communications, and a work force which is more committed to their job (Mohn 198-199). In his speech to the tenth annual spring conference of the Association for Quality and Participation the Senior Vice President-Operations of Miller Brewing Company summarized his feeling concerning quality circles by saying the following:

> Let me assure you that if we didn't save a single dollar due to the EI process, it would still be worth it - if only for the advances made in the management/union relations (Schumer 562).

The keys to getting these benefits are properly established and operated circles (Mohn 198-199.)

Implementation Plan

Once it has been decided that a company wants to look into a quality circle program, the concept should be researched. This can be done with a two person team, one of these being a quality control or operations person and the other representing human resources. They should look into the quality circle

concept and get a general understanding of how it works (Ingle 72). This committee should also evaluate the corporate culture to insure it is conducive to a participative program (Mohr 24-25).

In this evaluation, the team should assess the company as to their willingness to go through the necessary changes and their acceptance of new ideas. They should also evaluate the company's acceptance of the time needed to implement the program and the necessary capital expenditure. As a result of this evaluation any areas which need change should be noted and the type of change explained (Mohr 24-25).

Once the research and evaluation of the company's culture has been completed, the information is provided to top management. At this time, management must make a decision about quality circles. They can decide to proceed, drop the idea of the program completely, or institute necessary changes in the corporate culture before introducing the quality circle concept (Hutchins 124). If the final decision is to establish quality circles they must support the program totally with the necessary time, personnel, and budget (Crocker 70-71).

When the decision has been made to institute the quality circle concept it is important that it be introduced to both labor and management of the company. This includes the executives of any unions involved with the company (Crocker 40-41).

At this time a facilitator should be named and the steering committee formed, training should proceed for these people. With completion of the training the committee should set out to develop plans for the implementation process and goals for the program (Ingles 75). The number and areas of the circles should be set, and leaders assigned. The training for the leadership should be completed (Crocker 79).

Informational meetings should be held to explain the circle process to employees. They should be given printed information explaining the program. After the employees have had time to digest the material presented to them, and had their questions answered; they should be approached about volunteering for membership. From the list of volunteers circles should be formed. As the circles are formed training for the members begin, being lead by the circle leaders with the assistance of the facilitators. When the training

is completed the circles will proceed with the quality circle process (Crocker 78-80).

Circle Process

The first step in the quality circle process is identification of a problem which the members may want to address. This is done by each circle member taking a turn and identifying a problem in the area of concern. At this time there is no discussion on the items that are identified. Input is expected from everyone and all problems no matter how small or large are listed to be addressed at a later meeting (Herkimer 34-40).

Once all of the opportunities have been listed these would be analyzed to insure they fit within the responsibilities and guidelines of the program. Any item which does not fit would be eliminated. If there are items which can be easily corrected, such as a safety guard missing from a machine, or an area which needs to be cleaned, these would be corrected and completion reported to the circle. The members would then discuss the remaining items and select, by consensus, one item to address. As an example, lets take a hypothetical group from the blowmolding

department of a plastic bottle forming plant. The problem which they selected was, the downtime created because they ran out of the dye needed to produce bleach bottles (34-40).

The members of the group would then take a look at the problem they selected and identify the possible causes. In the dye example, they have identified the possible causes for the situation as:

1. Insufficient dye being ordered for the amount of production scheduled.

2. More bottles being produced than are scheduled.

3. Production is using more dye in the bottle than the formula states.

Once these possible reasons have been identified various members would be assigned to analyze each situation. When the analysis is completed the findings would be reported and the group would discuss these (34-40).

In our example the group that looked at the amount of dye being ordered found if the bottles were being produced within specifications there would be sufficient dye. With this information the circle ruled this out as the cause. The members studying the amount

of bottles being produced found more bottles were being produced than scheduled. The group analyzed the amount of over production and decided to have one of the members discuss the significance of it with purchasing. The members which were looking at dye usage found the bottles being produced appeared to have a darker color than the formula called for. The circle assigned members to look further into the situation of excess dye in the bottles (34-40).

The members, which were assigned to look at various situations concerning dye usage and over production, would report back at their next meeting. In our example the following was told to the group:

1. Purchasing knows about the over production. The extra usage is factored into the system, it was ruled out as a cause.

2. Concerning the amount of dye being used in the bottles a review of the ash test, which is the test for dye usage, being performed in the laboratory showed the bottles had twice as much dye as formulated.

The group then decided to investigate the dye usage and find out why the excess dye was being utilized (34-40).

Through brain storming the following possible reasons for the over usage were identified:

1. The amount of dye to be utilized in the formulation which purchasing has is different than the formulation that production uses.

2. The equipment isn't capable of feeding the proper amount of dye.

3. The operators have no means of knowing what is the correct amount of dye.

4. Someone, without approval, increased the amount of dye to be utilized and never formalized the process or informed purchasing.

Members were assigned to look into each of these possibility and bring back their findings to the next meeting (34-40).

At the next meeting the membership reported their findings. In our example the following was reported:

1. Purchasing and production are utilizing the same formulas.

2. In talking with the operators it was found that of the three dye feeders being utilized, one worked, one stuck some of the time and one had a part broken off which prevented the operator from doing any fine adjustment.

3. In checking with the operators it was found that they guessed at the color of the bottles. When some of the bottles were shown to them with the correct amount of dye, most of the operators thought the bottle was too light in color. In checking with the laboratory personnel, they said they checked the the ash content once a week if they had time. However, the results were not reported back to the operators.

4. The members checking to find if the dye usage had been changed without permission, could find no evidence of changed formulation. They confirmed that the formula being utilized by the operators was the same as being utilized by purchasing (34-40).

In discussing these results the circle concluded there were several problems. These were:

1. The operators had no procedure for determining if the bottles being produced had the proper amount of dye.

2. The dye feeding equipment wasn't working correctly.

3. The laboratory had a means of checking the bottles to see if they were formulated correctly, but the testing wasn't frequent enough to help the operators.

The group decided to discuss these items at the next meeting. To give them some expert advise they decided to invite the quality control manager to the meeting. They also had a member look into the feeding equipment and what had to be done to get it corrected (34-40).

At the next meeting the member who was looking into the feeding equipment reported maintenance corrected the feeder that stuck, but the feeder with the broken part had to be replaced. At this time they couldn't justify the expense to replace the other feeder. The circle discussed the ash test being done in the laboratory. The quality control manager explained how the test was performed and the equipment needed. It was decided that the testing couldn't be done by the operators. The Q.C. manager also explained increased testing could not be done by the laboratory, but he would insure that the results of the testing being done would be reported to production. The group then identified as their reasons for running out of dye as being:

1. The operators not knowing how much dye they were putting into the bottles.

2. The Damaged dye feeder.

Each member was to evaluate the problems and develop ideas for solutions to be discussed at the next meeting (34-40).

At the meeting they a had brain storming sessions concerning the two problems. For the dye feeder the correction to the problem was a given, replace the feeder. The circle needed to accumulate the necessary data to justify the cost of this correction. Two members were assigned to develop this information looking at the cost of increased dye usage and down time related to the feeder. Concerning the means for the operators to identify dye usage, numerous ideas were given. It was decided to develop a color chart, that the operators could utilize, as a comparison to identify the amount of dye being used (34-40).

The information for each of these solutions was collected and put into presentation form. The projected savings by replacing the dye feeder and instituting the utilization of the color charts was presented to management. Along with the information concerning cost, installation time and necessary training. The circle, in their presentation showed management that the pay back for these improvements, were within the parameters that management required.

Because of the pay back management instituted the color
chart program and ordered the feeder. This information
was relayed back to the circle at the next meeting.
The facilitator reported the success to the other
circles and plant personnel in the form of a news
letter (34-40).

The basic steps for the circles are to identify
the problems which concern the circle's area. Once
identified they select a problem which concerns them.
Data about the problem is collected and analyzed.
From this they develop solutions and choose the one to
present to management. Management then must act upon
the information presented and get back to the circle
explaining their action. Once the circle has presented
the problem to management they are ready to start the
process over, either utilizing the master list of
problems or developing a new list (34-40).

Problem Statement

When implementing a quality circle system it is
necessary that the employees are provided basic
information concerning circles so they can decide if
they want to be a part of the program. The purpose of
this research is to develop a manual that can be

utilized by management to give the employees an

overview of the quality circle process. The manual

will be written in such a manner as to be easily

understood by the employees and peak their interest in

the program. It will give the employee a total

overview of how the program works, the structure of the

system, benefits of the program and the role the

employee will play in this participative system.

Chapter III

METHODS AND EVALUATION

Materials

The project was to develop a manual (Appendix C)
to implement a quality circle program in a small
manufacturing company. This manual would be utilized
during the first stage of program introduction and
would include follow-up meetings involving the
employees and union officials. The purpose of the
manual is to give the employees a basic understanding
of quality circles, and how the program functions. It
is also a sales brochure, intended to sell the
employees on becoming a part of the program. The
manual consist of letters of introduction by the
company and union, an introduction, and five sections.

The first part of the manual includes letters from
both the president of the company, the union, and an
introduction to the manual. The letter from the
company president gives an explanation of why the
company is instituting this program and urges the

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employees to get involved. The letter from the union president insures the union membership that the officials of the union have been involved in the establishment of this program, and will be actively involved in all aspects of the program in the future. It also urges the union employees to get involved in the program.

The introduction has an outline of the manual, explaining to the reader what will be covered. The introduction then urges the employee to read the manual thoroughly, and contact management or the union leadership if they have any questions.

After the introduction there is a discussion of the historical background of participative management and the development of quality circles. This section traces both the establishment of participative management from the early nineteen hundreds in this country through the development of quality circles in Japan. Strengths an weaknesses of the program are also discussed.

The manual continues with a brief explanation of what quality circles are, and how they function. It explains the make up of the program and discusses the

responsibilities of the steering committee, facilitator, leader, and circle members.

The specific introduction of the program at the plant is covered next. In this section the exact steps which will be taken are explained, the first being the formation of the steering committee, with them receiving the necessary training. Once the steering committee has received the necessary training, there will be the meetings with the employees explaining the program and answering any questions. At these meetings the employees will be asked to volunteer for membership in circles. From these volunteers the circle members will be selected based on guidelines set up by the stearing committee. Once formed the first meetings will be held.

The manual continues with a complete explanation of the quality circle process. It explains how opportunities are identified thought brain storming and then analysis to see that they fit within the parameters of the program. Once those opportunities which do not fit the program are eliminated the group selects a workable issue. This is done through a consensus of opinion. The group then discusses how the problems with this issue are identified and a solution

developed. The final step in the process is the presentation to management of a solution for acceptance or rejection. The explanation in this manual is illustrated with an example.

The benefits of quality circles are also discussed. A properly developed program is explained as a win-win situation for both management and labor. The main reason behind this section is to sell the idea to the employees so they will want to become actively involved in the program from the start.

The last section is also an effort to convince the employees to embrace the program as their own. In this section is an honest discussion of the quality circle program, and how management views it. One of the main ideas discussed is the fact that the company wants to make more money. It is explained how a business has to make money if it want to continue being prosperous. It explains to the employee that working for a profitable company is good for the employee, and gives them the security they need in order to continue to support their family. The discussion continues with a section on corporation benefits.

Subjects

To evaluate the manual, developed for the
introduction of a quality circle program, a total of
four evaluators were selected. All of the evaluators
have previous experience with production facilities and
management systems. Their selection was based upon
their background, knowledge, and experience, necessary
criteria for an objective evaluation of this manual.

The first evaluator, Pete Schwierjon, is presently
employed at McDonnell-Douglas. Schwierjon, has been
employed there for a total of eighteen years; seventeen
of which have been in the area of quality assurance.
Presently he is a quality engineer, involved in the
formulating and implementation of quality assurance
plans for the company.

During his tenure at McDonnall-Douglas, Schwierjon
has been involved with, the implementation of a
quality circle program. He believes that circles can
be an effective tool "if the program is properly
administered, and management gives their full
commitment to the program." His opinion of the program
he was involved with is that it wasn't a success and

management did not give it the necessary time to develop.

Schwierjon has a Bachelors Degree in Electrical Technology from Washington University. He has also attended a number of seminars pertaining to circles and completed a variety of courses related to quality and management systems.

Dennis Hogan, the second evaluator, is currently employed with the Dial Corporation. His experience with quality management goes back to Swift and company where he was a quality control technologist and a product sales manager. He began his career at Dial as a front-line supervisor. Though the years, Hogan has held several managerial positions, including trainer for the implementation of total quality program, his present position. He has a Bachelor of Science degree in Business Administration from Southern Illinois University and has participated in several training classes and seminars in quality circle implementation and management.

Mike Nemerguth has held managerial positions at several corporations. During his career he has been involved with a number of management systems including

management by objectives and safety, quality,
performance program. Nemerguth has an MBA from Western
Illinois University and is currently a manager for
Borden Pasta St. Louis plant.

The fourth evaluator, Greg Weber has worked his
way into management through experience on the
production floor. Weber, started working for Purex
Corporation in 1975 as an hourly worker. He has worked
with this company for the last eighteen years during
which time it was purchased by the Dial Corporation.
For the first ten years with the company he worked as a
utility person, warehouse person and machine operator.
During this time he was active in the union and, served
as chief union steward. In 1985 Weber was selected to
enter management as a production supervisor, and during
the past year became a trainer for the implementation
of the Total Quality Management program. He has also
been trained and involved with several other management
systems, including Total Quality Management.

Instrument

To evaluate the manual a two part questionnaire

(Appendix A) was developed, as well as a letter
(Appendix B) of instructions for the evaluators. The
letter explained the purpose of the manual and
discussed the two questionnaires and what was expected
from the evaluators as they completed each
questionnaire. The letter concluded with a note of
appreciation for their time and assistance in
completing the project.

The instrument was essentially divided into two
sections. The first section gathered professional data
about the evaluators including education, managerial
experience, and knowledge concerning quality circle
programs. The second section served to evaluate the
quality manual. Respondents were asked to evaluate
format, readability, interest and degree of success.

Procedure

The method of evaluation was a questionnaire,
followed up with interviews either in person or over
the phone. Manual evaluators were selected from a list
of possible candidates based on education and
experience in a manufacturing facility. A smaller
group of people were approached about the project and

from this group four were selected to review the manual. They were contacted, the needs of the project were explained, and they were then asked to commit the time to complete the project. Once they committed to the project, an appointment was made where they were provided with the necessary information and paperwork.

At this appointment the person was given a letter explaining what was needed to be done, a copy of the manual, and the questionnaire. They were asked to read the letter and briefly look over the other papers. Then the project was discussed with them and questions were answered. They were also asked to provide a deadline for completing their review of the manual, this period ran from two to three weeks.

Two thirds of the way through the review period each of the persons reviewing the manual were contacted to evaluate their progress. Those that did not make the needed progress were encouraged to complete the task and if need be a new completion date was set. Two days before the final completion date, each person was contacted and arrangements made to pick up the completed work. On the appointed day the paper work

was collected and arrangements were made to contact each of the participants to discuss any points which need clarification. The results of the evaluations were then studied and comments noted. The evaluator was then contacted and ask to expand on their explanation and clarify their point. This clarification was noted on the sheet.

Once all of the comments were tabulated a master sheet was compiled for each section of the questionnaire which dealt with the manual. The various comments were placed on this sheet, and areas of agreement and disagreement these were noted. In areas of disagreement, it was evaluated on how the comments varied. If there were some similarities in the comments, even though there was overall disagreement, these similarities were noted.

Upon completion of this master sheet the review of the manual was evaluated and the comments of the reviewers studied. From these studies the manual was revised as needed. The manual was then reevaluated to insure that it still achieved its original objective.

Chapter IV

Results

The evaluators were questioned as to the need

for this type of manual in the introduction of a

quality circle program. Three felt that this manual

was necessary. However, they emphasized that it

should be utilized in conjunction with employee

meetings. As stated by Weber, "Absolutely. Our

experience at Dial with Total Quality Management has

shown that we did a poor job of communicating up

front the who, what, when, and why's of TQM."

Concerning this question Nemerguth said, "Yes. In

order to get employees to `buy in' to the program,

they need to understand what is going on."

The fourth evaluator felt that it was a good

manual, but for the introduction of a quality circle

program, it was more important to have a face to

face meeting with the employees. Hogan stated, "No-

I think that in general its a good manual-but for

`introduction' purpose, the program should be

75

explained, supplemented by an abbreviated version or an outline."

After discussing the need for the manual the evaluators were asked about the ability of employees to understand the manual. Fifty percent of them felt the manual was very easy to understand. As Schwierjohn stated, "The manual provided a brief basic description of what a quality circle is and how they function. It is a good foundation that could be easily built upon during continued team training."

The other two evaluators thought that the sequence of the manual made it hard to understand. Hogan stated, "Seems to be too much detail, especially if this is just handed to union employees and they're expected to read it on their own. I think they'll get lost." They both thought that the manual provided too much information for the employees to follow. They felt that the understandability could be helped by altering the sequence of topics.

Related to this sequence was the question of
the manual format and look. All of the evaluators
felt that the format was acceptable, but referred to
previous suggestions concerning the sequence of
topics. It was suggested that the benefits and why
of quality circles follow the historical background
section. Related to the format, three of the
evaluators thought that the manual had a
professional look. However, Hogan said,"No-It looks
like a 'Term Paper' for a college course." He
though it needed to be dressed up through the
utilization of different styles and fonts.

After discussing the physical make up of the
manual the evaluators were ask about the ability of
the manual to keep the interest of the reader. Each
of the persons questioned thought that the manual
was interesting. Weber and Hogan said, the interest
could be increased with a reordering of the sequence
of topics. Weber stated, "If re-ordered I believe
the manual would capture an employees interest and
encourage them to read on."

While keeping the readers interest the manual had to provide information to them. All evaluators thought that it provided the needed information. When questioned Nemerguth said, "Yes, the historical background is helpful and appropriate. More real world examples of QC could be used, but may make the manual too long. A total overview might also include QC failures." One of the persons questioned felt that there may have been too much information provided. Hogan stated, "There is plenty of good information, perhaps a little too much for an initial roll out."

Two of the evaluators felt that it would help if additional information was provided concerning the benefits to employees. If was thought that the additional information would help sell the idea of quality circles. Although it was said that this additional information may help sell the manual, all of the evaluators thought that the manual would give a person who knows nothing about quality circles an understanding of the program. Weber stated, "In general terms the manual will tell me what the program will do for me. A more detailed

description of the training would benefit me outside of my work activities."

After the evaluators were asked about the information provided, they were questioned as to if the manual achieved its objective, which was to educate and interest the employees in quality circles. The three people who answered felt that the manual achieved its objective. However, it was thought that some changes could be made to make the manual stronger in this area. Weber said, "Overall yes, I'm sure the education of the employee objective was totally met. A more detailed description of the training would have helped." Nemerguth's feelings were, "Education is achieved. Interest needs to be pumped up with specific benefits to employees, i.e., money if available within parameters of the program."

The last concern of the evaluation was if the manual sold the idea of quality circles. There were three questions concerning the selling of the program. The first ask if the manual adequately explained the benefits of the program to the employees. The evaluators felt that although the

benefits of the program were explained, there should be additional emphasis placed on these benefits. As Schwierjohn stated, "The manual does identify the benefits that can be obtained from participation in the program. This area probably could be expanded to identify or describe the personal benefits (self satisfaction) that can be achieved by being a member, especially if the circle is successful."

The other two questions ask if the manual sold the idea of quality circles and provided a sense of excitement about the program. Of the three people who answered this question only one felt that the manual sold the idea of quality circles. The other two thought that the manual provided the needed information, but they weren't sure that it sold the idea. As Schwierjohn stated, "I'm not sure the manual 'sold' the idea of QC circles. I do believe that it provided information and examples that may entice employees to seek more information on how the program could directly affect themselves. The manual combined with a good oral presentation would be an effective tool."

The second question asked if the manual raised
a sense of excitement about the program. None of
the evaluators felt that the manual generated a
sense of excitement. They did feel that the manual
would be of interest to the employees, and it may
generate some interest in the program. But they did
not think it created a sense of excitement. As
Schwierjohn said in his answer. "I don't believe the
manual provides a sense of excitement. It may pique
the interest of the employees, but the real sell is
in the oral presentations that introduces the QC
program."

Chapter V

Discussion

Summary

The first question of the evaluators was concerned with the need for a manual such as this in the introduction of a quality circle program. Seventy five percent of the evaluators felt that the manual was needed for the introduction of the program. One of the evaluators, who was recently involved with the introduction of a total quality management program, emphasized the need to communicate with employees about the program. He stated that one of the problems they had, was not providing enough information concerning the program. Research has shown that one of the causes of failure in the introduction of a management program is the employees didn't understand the system. The manual is set up to address this problem by providing the necessary information concerning quality circles.

The one evaluator who didn't feel the manual was necessary, thought that it was more

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important to have employee meetings to explain the
program. He thought an abbreviated manual should be
utilized in conjunction with these meetings. This
manual provided a minimum of information needed for
a person to get a total overview of quality
circles. It was also developed to be used in
conjunction with employee meetings.

For the manual to fill the need to educate the
employees, it must be understandable. Half of the
evaluators thought that the manual was very
understandable as it was written. They felt it
provided a good brief description of circles and was
a good foundation for the program. However, the
other two thought the manual provided too much
information but could be made more understandable by
changing the sequence of topics. The first four
parts of the manual are set up in a sequence which
leads the employees logically through the
development of the program. This lets the employee
educate him/herself step by step through the
program. To change the sequence of these four
sections would give the employee some information
without giving them the basics needed for

understanding. The last two parts are used to sell
the program. As with all sales presentations, the
sale must be made after the person understands the
product. For this reason these parts must remain at
the end.

Related to sequence is the look and format of
the manual. The evaluators thought the format was
acceptable, however, two felt a change in sequence
would improve the overall appearance of the manual.
The sequence is set up to achieve the purpose of the
research. By changing the sequence it would reduce
the strength of the manual. One of the evaluators
thought the manual looked like a term paper because
of the font utilized, this has been changed to give
a more professional look.

After discussing the look of the manual the
evaluators were ask if the manual was interesting to
the reader. Each of the persons thought the manual
was interesting, however, two of the evaluators
again thought reordering would help the interest.
It is important that the manual be of interest to
the reader, so they will continue to read. If

information is provided, but is not interesting enough for the person to read, the information will be of no value.

Related to interest is the information provided. The evaluators were asked if there was enough information provided. They each thought sufficient information was provided to initiate a quality circle program. Two of the evaluators thought additional information concerning benefits to the employees could be provided. This could make the manual too long, and the information would be provided during discussions at the employee meetings.

The most important question of the evaluators was did the manual achieved its objective of educating and selling the idea of quality circles. Those evaluators which answered the question thought the manual achieved its objective. They thought that the objective could be pumped up with additional information provided on benefits. However, any additional information would make the manual longer, and could adversely affect the interest of the manual.

Of the three evaluators that answered the
questions concerning the manuals ability to sell
quality circles, only one stated that it sold the
idea. The other two thought the information was
provided, but they didn't think it sold the idea.
They thought that increasing the information on
benefits would help the sales of the program. They
also though that a good oral presentation would help
sell the program. It was originally decided that
the manual would be utilized in conjunction with
employee meetings, the additional sales that the
evaluators felt was needed would be done at these
meetings.

The objective of the research was to develop a
manual that management could use to give the
employees an overview of quality circles. It was
agreed by the evaluators that the manual provided
the needed information for the employees in a form
which could be understood. The manual achieves the
objective, but it must be realized that it is to be
utilized in conjunction with meetings and

discussions with employees to help answer any questions.

Limitations

One of the problems with the research was the selection of the four people to evaluate the manual. The four people have the majority of qualifications needed to evaluate the manual. However, the one thing which was lacking was a person who had the overall responsibility for a production facility. There should have been selected, a fifth person, who had experience as a plant manager of a production facility. This would have given some additional input into the evaluation.

A second problem with the evaluators concerns the initial information they were provided. The introduction to the questionnaire did not adequately explain the manual would be used as a part of a complete program to introduce quality circles. If this would have been explained more completely, some of the comments of the evaluators concerning the

utilization of the manual would have been
different.

Suggestions for Future Research

Quality circles is a program which was in vogue
in the United States in the late seventies to early
eighties. Although it is the core program upon
which the participative management systems of today
are based, quality circles are dated. The majority
of the information and studies done on circles were
from research and papers done in the nineteen
eighties. In a future study such as this, it would
be advantageous to select a current management
system such as Total Quality Management. By doing
this, the research could be utilized in present
management activities.

When setting up the research, the purpose was
to develop a manual for the introduction of a
quality circle program. It would have been more
effective to develop a complete program for the
introduction of quality circle rather than just the
manual. The additional work necessary to lay out a

complete procedure for this introduction would have
been minimal. However, this additional information
would had answered some of the questions which the
evaluators have concerning the introduction of the
program. By developing a complete program the data
could have been used to introduce a participative
management system. With the research as is, there
would have to be developed additional items for the
introduction of the system.

APPENDIX A

EVALUATOR QUESTIONNAIRE

Name _____

Work History & Duties. Please provide company
worked for, their business, your duties in each
position, years in position.

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Do you have a previous knowledge of quality
circles, if so please explain your knowledge and
experience with them? Cover your feelings about
the program and what it achieved.

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Do you have previous knowledge or experience with
any other management systems (TQM, MBO'S, etc.).
If so please explain your knowledge and
experience? Was the program a success?

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Give a brief summary of your education, cover
majors, subjects studied, degrees earned and from
where.

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Have you had any experience in a production
facility, if so please list? Either management or
labor, explain your duties.

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Have you had any supervisory experience, if so
pleas list? Explain the number of people
supervised, type of department, union or not.

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List any outside experiences related to management
of groups or group dynamics.

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Please list and describe any seminars or training
related to management systems or quality circles.

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Any additional information about yourself which
may be utilized by me in showing your
qualifications to review this manual.

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Manual Questioner

Was the manual easily understandable, could it be understood by all employees who would utilize the it? Does it make sense?

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Was the manual interesting, would the people read the manual once they started?

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Did the manual provide enough information concerning quality circles? Does it give you an understanding of QC and their function? Does it give a total overview of quality circles?

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Were there parts of the manual which needed to
provide more information?

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Were there parts of the manual which provided too
much or the wrong kind of information?

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Was the format of the manual acceptable?

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Did the manual sell the idea of quality circles?
After reading the manual would people want to be
involved?

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Would the manual give a person who knows nothing
about quality circles an understanding of quality
circles? Will they understand what the program
will do for them?

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Is there anything in the manual that you would
change?

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Did the manual sell the idea of quality circles?
After reading the manual would people want to be
involved?

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Would the manual give a person who knows nothing
about quality circles an understanding of quality
circles? Will they understand what the program
will do for them?

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Is there anything in the manual that you would
change?

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Is there any information that you would add to the manual?

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Is there any information that you would delete from the manual?

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Does the manual achieve its objective, which is to educate the employees and interest them in quality circles?

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Is this type of manual needed for the introduction
of a program? Explain your answer.

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Does the manual have a professional look, does it
give a quality image? Comment about the image.

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Does the manual adequately explain the structure
of the quality circle system?

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Does the manual explain the benefits of the program, does it do it in such a way as to interest the employees in participating?

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Is there a sense of excitement about the new program, or does it put forth an image of just another management program, please explain your answer?

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What can be done to make the manual better?

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Additional comments about the manual?

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APPENDIX B

LETTER OF INSTRUCTION

Robert Appel
716 North Elizabeth
Ferguson, Missouri 63135
(314) 524-6033

Dear Mike:

As I told you during our phone conversation
as part of my MBA I have to write a thesis. The
type of paper I am writing is an expository study,
in which I research a subject and then develop a
manual related to the subject. The subject is
participative management, specifically quality
circles. The purpose of the study is to develop a
manual which could be utilized by a small to mid-
size company to introduce the program to their
employees.

This manual would provide the employees with
an overview of quality circles, the structure of
the system, the benefits of the program, and the
involvement the employee can have in the program.
It is to be written in an easily understood
manner, and in such a way as to encourage the
employee to be involved with the program.

With the manual I have provided two
questionnaires which I will need you to fill out.
The first one concerns personnel information about
yourself. I will need this information to show
your ability to evaluate the manual. The second
questionnaire is for the manual itself and I may
follow this up with a phone conversation. I would
ask you to answer the questions as completely as
possible. Please don't just say yes or no,
explain your answer and why you gave that answer.
If you have additional comments please be sure to
put them on the questionnaire or on an additional
piece of paper.

If you have any questions or need additional information please contact me. Thank you for your assistance.

Sincerely.

Bob Appel

APPENDIX C

QUALITY CIRCLE MANUAL

INTRODUCTORY MANUAL TO QUALITY CIRCLES

ROBERT APPEL, M.S

NOVEMBER 11, 1993

Because of increased competition and the economic pressures of today's market place, for a company and their employees to continue to prosper, it is very important for a business to stay ahead of their competition. To continue our role of leadership, the management of your company has been continually researching and evaluating their management system. Because of this research we have decided to establish a participative management system in the form of quality circles. The introduction of this system will begin in the next few weeks, with participation in the program being voluntary. Your union is actively participating in the establishment of this program and encourage your support in the future.

To give you a basis for your decision concerning the program we have developed this manual, which will give you an overview of quality circles. It is hoped that the manual, along with the informational meetings, will provide you with the necessary information and desire to be a part of the quality circle movement. If at anytime you have questions concerning this manual or the circle program please contact your supervisor, another member of management, or your union leaders.

Sincerely,

John Doe

President

For the last several months your union has been discussing with the management of your company the implementation of a quality circle program. We have been fully involved in this program from the onset, and will continue this involvement in the future.

We feel that the program will be good for the company, management, the employees and the union; and we urge each of you to become actively involved. If you have any questions concerning this manual, or the program; please contact your supervisor, another member of management or your union representative.

Sincerely,

Joe Smith

President Widget Makers Union

Introduction

The following manual has been developed our company to provide you the necessary information, to make a thoughtful decision, on your involvement in the quality circle program. The manual will provide you with the following:

1. Background information concerning participative management and quality circles.
2. A description of quality circles.
3. An explanation of how circles work.
4. An outline of the implementation steps to be taken.
5. A discussion of what circles can do for you and your company.

We urge each of you to read the manual thoroughly, noting any questions that arise. The information will be discussed in the employee meetings and any questions you have will be answered. If you have specific questions which you want answered before your employee meeting or was not answered in your meeting, you can contact any management person or your union representative concerning these questions.

Historical Background

Participative management. has been utilized in the United States since the earliest stages of the management movement. Some of the earliest leaders of management development stressed the importance of employees and the contributions they could make to a company's development. In the 1930's. it was found that in companies where there were democratic work groups actively participating in decision making, the businesses were more productive in both human satisfaction and achievement of their objectives.

In the late 1950's there was a program started in the United States by a management consultant called, Participative Management System. This program was very similar to the quality circle concept later developed in Japan. The program was implemented in many smaller companies with excellent results. The philosophy of this program was that the workers have the greatest knowledge concerning their jobs and because of this are in the best position to bring about effective quality improvements.

Although the seeds of quality circles were developed in the United States, they were not accepted by management in this country. Most feel that in the fifties and sixties the business climate was not conducive to a system such as quality circles. At this time there was very little competition from other countries and the economy was expanding very rapidly. Businesses had no trouble making a profit and felt no need to consult with the employees.

However, in Japan things were much different. Because of the destruction left from the war and the poor name the country had for quality before the war, Japan was ready for quality circles. The idea was conceived by two American consultants Dr. Edward Deming and Dr. J. M. Juran. This work was started in the early fifties as a means to increase the

What are Quality Circles

A quality circle is a group, usually made up of eight to ten volunteers from a department or area, who meet together for one hour a week on company time. In these meetings, which are conducted by a leader, the group will be trained to identify, analyze and solve problems which are found in their work area. Once the problem has been identified and a possible solution developed; that solution, along with support data will be provided to management. Management will then institute the solution or get back to the circle to explain why the corrective action wasn't taken. The circle is the heart of the program. and is supported by various structures, which will be explained in the following sections.

The quality circle system is made up of a steering committee, facilitator, leaders, and circle members. The steering committee will be formed with in the next few weeks and will consist of representatives from management and labor. The committee will consist of representatives from each management level of the plant. The plant manager will be the leader of the group. Also included, will be officials of the local union and shop stewards from the plant. This committee will be the decision making group for the circle program with all decisions being made by a consensus of the group.

The group will be a policy making group and will not be involved in the day to day operation of the circles. They would address such areas as the number of circles, the implementation procedures, training needs, use of a consultant, selection for membership, guidelines for reporting, implementation. and promotion of the program. They will also oversee the on going development of the concept. In the operation of the circles the facilitator, who is a committee member, will be the liaison between the circles and the committee.

Upon formation of the committee, one of their first responsibilities will be the acceptance of the facilitator. This person supports the circles from inception, though all stages of development. During the initial period the facilitator will actively promote the program, and explain the circle process to you. The facilitator will train the circle leaders and work with them in the training of the circle members. As the program continues the facilitator will work with the circles lending support as necessary, being a technical advisor, and assisting the leader.

In the initial set up of circles, the leaders will be assigned by management. As the program progresses, the leaders will be chosen by consensus of the circle membership. These leaders are not bosses and do not control the circle. They are leaders and have two main functions:

1. To act as a source bank for the circles, to advise, train, and develop the members in the quality circle activities.
2. To insure that once a person decides to be a member of a circle they participate in the activities of that circle.

The responsibilities of this leader can be broken down into two types:

1. The humanistic responsibilities which deal with the way the members feel about the program. The key one to keep the membership enthusiastic about the program. Other duties related to this would be to create a team spirit among the membership, insure a proper code of conduct, and assist the members learning methods to better themselves.
2. The structural responsibilities deal with the functioning of the circle. These include such things as the operations of the circle, record keeping, checking on members assignments and conducting meetings.

The leader, with the assistance of the facilitator, will introduce the members to the circle process. Membership in circles is strictly voluntary and no one has to join. However, once a person decides to join, they will be expected to be

actively involved. Once in a circle you will be given a brief overview of the process and the necessary training to proceed. As new skills are needed to continue the work, these will be provided to you by the leader. Some of the things you will be learning are brain storming, various methods of problem analysis, conflict resolution and statistical methods. These will be explained as your work in the program progresses.

Quality Circle Introduction

The quality circle process has already been started at our company and you will be kept informed through the utilization of a company quality control newsletter and meetings. In this section you will be informed of the steps which will be taken in the future:

1. The next step in the process will be the formation of the steering committee. This group will be composed of volunteers from management, employees and the union. Once the people invited to sit on the committee have accepted they will be trained in the circle process and proceed with their duties to implement the program. These include:

   a. Review, modify if necessary, and then acceptance of the objectives and goals of the program. Once these have been accepted by the committee they will be published for your information.

   b. Accept or reject the facilitator, which has been selected by management.

   c. Review the implementation procedure, modify if necessary, and accept the completed procedure.

   d. Select the area in which the first circles will be developed.

2. The second step will be the training for the circle leaders, management, union officials, and shop stewards. This training will provide:

   a. An overview of the program explaining how the program works and what we expect to achieve.

   b. The implementation plans and how the circles will be developed.

   c. An explanation of the various techniques to be utilized by the circles.

   d. Additional training will be given to circle leaders so they can train the circle members.

3. Once this training has been completed there will be

informational meetings held for all employees. These meetings will be on company time and attendance will be voluntary. In these meetings we will cover:

    a. Information concerning the development of quality circles at other companies.

    b. An explanation of how the program will work.

    c. A discussion of the implementation process.

    d. The expectations of the company and what we feel the program will do for the company and it is employees.

    e. A question and answer period, at which time the company and union officials will field questions concerning the program.

4. After the completion of these meetings, the employees in the areas of the pilot program will be asked to sign up for membership in the circles.

    a. The steering committee and circle leaders will evaluate the volunteers and select those to be in the first circles. This selection will be based on a criteria established by this committee.

    b. Those selected will be notified of their selection and the time/place of the first meeting.

5. First Meetings

    a. The first few meetings will consist of training and education.

    b. In these meetings the following will be covered.

        1. The objectives and goals of the program.

        2. Explanation of what is to be covered in the next few meetings.

        3. Rules of the circle.

        4. Naming of the circle.

        5. Selection of meeting time and place.

        6. Techniques for problem identification, selection, analysis, and solving.

    c. Once the basics have been covered the circle will progress with the circle process.

Circle Process

The following is an explanation of the circle process and an example to help you follow the explanation.

The first step in the quality circle process is identification of problems which the members may want to address. This is done by each circle member taking a turn and identifying a problem in his/her area of concern. At this time there is no discussion on the items that are identified. Input is expected from everyone and all problems no matter how small or large are listed to be addressed at a later meeting.

Once all of the opportunities have been listed these would be analyzed to insure they fit within the responsibilities and guidelines of the program. Any items, which are not within the guidelines of the program would be eliminated. If there are items which can be easily corrected, such as a safety guard missing from a machine, or an area which needs to be cleaned, these would be corrected and completion reported to the circle. The members would then discuss the remaining items and select, by consensus, one item to address. As an example, lets take a hypothetical group from the blowmolding department of a plastic bottle forming plant. The problem that they selected was the downtime created by a lack of dye needed to produce bleach bottles.

The members of the group would then take a look at the problem they selected and identify the possible causes. In the dye example these may include:
1. Insufficient dye being ordered for the amount of production scheduled.
2. More bottles being produced than are scheduled.
3. Production is using more dye in the bottle than the formula states.

Once these possible causes have been identified various members would analyze each situation. When the analysis is

completed the findings would be reported and the group would discuss these.

In our example the group that looked at the amount of dye ordered found that if the bottles were being produced within specifications, there would be sufficient dye. With this information the circle ruled this out as the cause. The members studying the amount of bottles being produced found more bottles were being produced than scheduled. The group analyzed the amount of over production and decided to have one of the members discuss the significance of it with purchasing. The members, which were looking at dye usage found the bottles being produced appeared to be darker than bottles with the proper amount of dye. The circle assigned members to look further into the situation of excess dye in the bottles.

The members, which looked at the various situations concerning dye usage and over production, would report back at their next meeting. In our example the following was reported:
1. Purchasing knows about the over production. The extra usage is factored into the system, it was ruled out as a cause.
2. Concerning the amount of dye being used in the bottles; a review of the ash test, which is the test for dye usage being performed in the laboratory, showed the bottles had twice as much dye as formulated.

The group then decided to investigate the dye usage and find out why the excess dye was being utilized.

Through brain storming the following possible reasons for the over usage were identified:
1. The amount of dye to be utilized in the formulation which purchasing has is different than the formulation that production uses.
2. The equipment isn't capable of feeding the proper amount of dye.
3. The operators have no means of knowing what is the correct amount of dye.

Members will look into each of these possibilities and bring their findings to the next meeting.

At the next meeting the membership reported their findings. In our example the following was reported:

1. Purchasing and production are utilizing the same formulas.
2. In talking with the operators it was found that of the three dye feeders being utilized, one worked, one stuck sometimes and the other had a part broken off which prevented the operator from doing any fine adjustment.
3. In checking with the operators it was found that they guessed at the bottle color. When some of the bottles were shown to them with the correct amount of dye, most of the operators thought the bottle was too light in color. In checking with laboratory personnel, they said they checked the ash content once a week if they had time. However, the results were not reported back to the operators.

In discussing these results the circle concluded there were several problems. These were:

1. The operators had no procedure for determining if the bottles being produced had the proper amount of dye.
2. The dye feeding equipment wasn't working correctly.
3. The laboratory had a means of checking the bottles to see if they were formulated correctly, but the testing wasn't frequent enough to help the operators.

The group decided to discuss these items at the next meeting. To give them some expert advise they decided to invite the quality control manager to the meeting. They also had a member look into the feeding equipment and what had to be done to get it corrected.

At the next meeting the member who was looking into the feeding equipment reported maintenance corrected the feeder that stuck, but the feeder with the broken part had to be replaced. At this time they couldn't justify the expense to replace the feeder. The circle discussed the ash test being done in the laboratory. The quality control manager explained how the test was performed and the equipment needed. It was

decided that the testing couldn't be done by the operators. The Q.C. manager also explained increased testing could not be done by the laboratory, but he would insure that the results of the testing being done would be reported to production. The group then identified as their causes for running out of dye as being:
1. The operators not knowing how much dye they were putting into the bottles.
2. The damaged dye feeder.

  Each member was to evaluate the causes and develop ideas for solutions to be discussed at the next meeting.

  At the meeting they had a brain storming session concerning the two problems. For the dye feeder the correction to the problem was a given, replace the feeder. The circle needed to accumulate the necessary data to justify the cost of this correction. Two members were asked to develop this information; looking at the cost of increased dye usage and down time related to the feeder. Concerning the means for the operators to identify dye usage, numerous ideas were given. It was decided to develop a comparison color chart, that the operators could utilize, to identify the amount of dye being used.

  The information for each of these solutions was collected and put into presentation form. The members presented to management the projected savings realized, by replacing the dye feeder and instituting the utilization of the color charts. Additional information concerning cost, installation time and necessary training; showed management, that the pay back for these improvements were within the parameters that the company required. Because the pay back was favorable management instituted the color chart program and ordered the feeder. This information was relayed back to the circle at the next meeting. The facilitator reported the success to the other circles and plant personnel in the form of a news letter.

  The basic steps for the circles are to identify the problems which concern the circle's area. Once identified they select a problem which to address. Data about the problem is collected

and analyzed. From this they develop solutions and choose the one to present to management. Management must act upon the information presented and get back to the circle explaining their action. Once the circle has presented the problem to management they are ready to start the process over, either utilizing the master list of problems or developing a new list.

This is a very simplistic example of how a circle may work. In a real situation the circle may have to utilize a variety of sophisticated problem solving techniques as well as statistical analysis. There may also be times when the group has trouble reaching a consensus, at these times the group will have to utilize their humanistic and conflict resolution skills. Under our program each of you will be taught the necessary skills as needed in your circle. With the learning of these skills you will be able to apply them to your daily work and your time away from work.

Benefits of Quality Circles

Quality circles are a people building processes, which will benefit the employees, and the company. A properly developed and operated circle program can provide a WIN-WIN situation for both labor and management. Some of the benefits are:

For the employee:

1. The training and activity involved in the circle movement will provide the employee a chance to grow and feel a sense of achievement.
2. There will be improved communications skills for the employee. This improvement will be noted in the everyday activities at work as well as outside the work place.
3. Problem solving skills will be developed which the employee will utilize to help solve the problems of the work place. These skills will also be transferable to their outside activities.
4. The creativity of the employee will be developed. They will learn how to look outside of the normal means of problem solving.
5. The employees will learn conflict resolution; which will be utilized within the circles, in other areas of the work place, and during their daily life.
6. They will learn techniques for planing and conducting effective meetings.

For Management

1. Supervisors become better trained and better able to handle the every day activities of managing the company.
2. There will be better communications among the managers and between the managers and employees.
3. The supervisors will improve on their ability to solve problems in the work place and will be assisted by the employees in this problem solving effort.

For the company
1. As the program develops and people become actively involved, it will bring about increased productivity and profits to the company.
2. Better relations will develop between the company, its employees, and the union.
3. A spirit of teamwork will develop among all the employees. All employees in the company will focus on the same goal and pull in the same direction as a team.
4. As the program progresses there will be an increase in the quality of the products being produced. Along with this increased quality will be a reduction of waste, and an increase in productivity. This will provide increased marketability of our product.

Why Quality Circles ?

This program is being developed, because we feel it will make us a more competitive company in the future. As you know any business, which wants to stay in business, must grow and prosper. By instituting quality circles we believe the company, as well as you as an individual, will experience this growth and prosper from it.

Granted, our main concern is the competitiveness of the business, but we also feel that the program will develop the employees. Though the training that each of you will receive, we feel that you will grow in your personnel as well as your work life. This growth will be good for you and the company.

We also see this as a program which will assist management in their growth. Through the training and work with various circles, management will achieve a better understanding of the employees and their needs. We foresee this as a means to improve communications between management, and employees. This improved communications can only lead to a better working relationship and a more competitive company.

When you hear people discuss this program you may hear them say that the company is only doing it to make more money. We would like each of you to understand that we are doing this to make more money. For a business to stay profitable and grow, it must do things better and make more money. It is not a selfish thing for a business to want to make more money. If the business grows, more people work and those presently working are more secure in their job. Besides this program helping the business to grow, it will also help the individuals involved to grow.

We are instituting this program because, we feel that it will help the business, its management, and you our employees. Please study this manual , and then get involved.

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