CHARACTERISTICS OF SUCCESSFUL WORK TEAMS:

APPLICATIONS AT SATURN AND

GENERAL ELECTRIC

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CHAPTER I

INTRODUCTION

There is a growing trend in organizations to use work teams. In some companies, work teams manage entire divisions; in others, they are responsible for tasks ranging from housekeeping to product development, employee discipline and developing compensation plans. Those who manage successful work teams say the workers have more control over their jobs, display greater creativity in their work and have a sense of a larger stake in the company (McKee, 1992).

There are various types of teams to serve differing purposes. They include task forces for special projects, quality assurance teams to assure that quality objectives are met, cross functional teams to provide varied expertise for problem solving, product development teams to develop new products, and self-directed teams to perform ongoing processes (McKee, 1992).

All work team programs, however, do not achieve the same results. At the Volvo Corporation's Kalmar plant, manufacturing faults and labor hours per car were reduced by 39 and forty percent respectively (Sherman and Bohlander, 1992). There is also the successes of Modicom, Inc. (a subsidiary of Mitsubishi), where six software products were brought to market in one third normal time (Byrne, 1993). At the General Motors assembly plant in Van Nuys, California, implementing the team concept produced no

increased productivity, quality improvement or cost reduction (Turner, 1989). At Hoescht Celanese, a team assembled for the purpose of developing and implementing a new order entry system, alienated users to the extent that two years after the system became functional, animosity and conflict still existed (Maglitta, 1995).

There may be problems with the use of work teams if they are used in an inappropriate situation. This can occur when managers or organization development specialists perceive the deployment of work teams as a general activity (Dyer, 1977). In those situations where work teams are used inappropriately, they may cause disruption within the organizational unit. This can result in a generally negative image of the work team concept.

Dyer (1977) identified four barriers to achieving work team success. If (1) the work requires only limited interaction, (2) the manager does not understand, or is unwilling to commit the resources required, (3) there is no feeling of need for the team by its members and/or supervisors, or (4) solutions have already been identified and the team concept is perceived as being implemented solely for the purpose of confirming the decision.

There are certain myths about work teams which also serve as barriers to their success. Frequently, team leaders, facilitators and/or supervisors jeopardize team building by succumbing to the myths that (a) staying positive is best, (b) resistance (to change) must be overcome, and (c) it is best not to get personal. If a team is to be successful, negatives must be surfaced and dealt with, resistance may not go away and may preclude successful implementation of the team concept, and it may be necessary to

deal with personal issues if the team is to succeed (Robbins, 1993). In a survey of work teams in 500 organizations, Wilson Learning Corporation found that individual factors such as unwillingness of team members to set aside position and power, and diverse levels of ability among members contribute to the lack of success of some work teams. The survey also revealed that organizational factors such as lack of commitment by top management and internal competition could limit team performance (Gunsch, 1993).

Nature of the Problem

The problem prompting this study was the issue of some work teams failing to achieve anticipated results.

Purpose of the Study

The purpose of the study was to identify common characteristics of successful work teams.

Research Question

The study sought to answer the research question: What are the common activities which lead to successful implementation of work team programs?

Definitions

The following terms are defined for purposes of the study:

Cross functional team: A permanent or temporary group consisting of members who each possess particular skills, and when working together, provide the skill set required to accomplish a given objective (Milkovich and Boudreau, 1994).

Quality circles: Small groups of workers who meet periodically to discuss ways to improve their work and the overall work process (Dobyns and Crawford-Mason, 1991).

Self-directed (Self-managed) team: A group of individuals responsible for accomplishing a given set of tasks with minimal supervision or methodology directives (McKee, 1992). There are usually small groups of employees who have ongoing responsibility for managing themselves and their work. Members typically, with minimum supervision, handle job assignments, plan and schedule work, make production related decisions and take action on problems (Wellins, 1992). They differ from quality circles and cross functional teams in that they are formal, permanent organizational structures.

Work team: A group of two or more individuals who interact independently to achieve specified and shared objectives (Milkovich and Boudreau, 1994).

Limitation

A limitation of the study is that it was a review of the works of others.

Synopsis

Chapter II provides a historical perspective of the development of work teams. It also addresses work teams and their utilization. Chapter III presents the methodology of the study. Chapter IV presents the finding of the study, including an analysis based on a review of the data regarding the General Electric and Saturn corporations. Chapter V presents the conclusions drawn from the study and recommendations for applications and further study of the subject of work teams.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter reviews the literature on the subject of work teams in general. It includes the historical perspective and evolution of work teams and applications of the work team concept in organizations and the transition of employee groups into work teams.

Historical Perspective and Evolution of Work Teams

In Chapter I, a list of definitions of work teams used in this study was provided. However, a precise definition of work teams is somewhat difficult (Guzzo and Dickson, 1996). In many instances, differences may be more semantical than substantive. In the context of accomplishing work through the use of teams or groups, the terms self-managed teams, self-directed teams, cross-functional teams, quality circles, task forces, autonomous work groups and even crews and committees, to name a few, may be encountered in the literature (McKee, 1992; Milkovich and Boudreau, 1994).

The accomplishment of work by teams or groups is not a new concept. A series of studies, led by Elton Mayo of Harvard University, was conducted from 1927 to 1932 at Western Electric Company's Hawthorne plant in Cicero, Illinois (Reiger, 1995). Earlier studies by the National Research Council had not supported the hypothesis that

productivity increased with better lighting in the workplace (Reiger, 1995; Dyer, 1977). The Mayo studies led researchers to conclude that a factor in the success of the work teams studied was the establishment of a sense of group identity by team members. This conclusion was reached after five years of study of a team of six employees in the telephone relay assembly area. During the study, rest periods, methods of pay, varied lengths of work weeks and a number of other variables were introduced (Mondy and Premeaux, 1995). The researchers found that output seemed to be linked to something beyond tangible incentives (Dyer, 1977).

The researchers then interviewed the individual team members and found that they felt important because they were singled out to participate in the study and were the focal point of the plant (Reiger, 1995). They had also experienced a positive change in mental attitude by being given the freedom to express their opinions to upper management and were consulted before changes were made (Reiger, 1995; Mondy and Premeaux, 1995). A significant outcome of the studies was that they led to the establishment of the field of Industrial Psychology (Dyer, 1977; Reiger, 1995).

There has been an evolution of interest in accomplishing work through teams. The Group Dynamics theories of the 1940s advocated employee participation in the decision making process and addressed the impact of the work group on performance (Mondy and Premeaux, 1995).

The group dynamics theories were developed on the premise that if group members were given the opportunity to discuss and participate in decision affecting them personally, they would be more likely to support the decision. This theory was confirmed

by Kurt Lewin during his work with housewives in an attempt to change American dietary habits (Mondy and Premeaux, 1995). Likert and Likert (1976) suggest that the beliefs, attitudes and behavior of individuals are shaped and impacted by the groups with which they are associated.

The Leadership and Sociotechnical (sic) theories of the 1950s and 1960s stressed the value of groups having both social and task leaders (Likert and Likert, 1976) and the blending of both social and technical considerations among work groups (Mondy and Premeaux, 1995).

An early advocate of the value of consideration of the human or social element in combination with the technical element was Mary Parker Follett, a contemporary of Frederick Taylor (Reiger, 1995). The needs hierarchy model of Abraham Maslow (1970), the Hygiene Factor theory of Frederich Herzberg (1966) and the work of others (Sherman and Bohlander, 1992) while directed toward motivational research, emphasize attention to the human element and employee empowerment to increase productivity. The Managerial Grid, developed by Blake and Mouton (Rue and Byers, 1986) is a model depicting five leadership styles and their respective impact on sociotechnical organizations.

The Systems and Contingency theories of the 1970s and 1980s held that organizations behave as open systems seeking equilibrium and that inputs, transformations, and outputs must be fit to various contingencies (Mondy and Premeaux, 1995). The systems and contingency theories extend to all organizational functions including work group dynamics (Tubbs, 1988).

A system may be thought of as a collection of parts which function as a whole (Kauffman, 1980). If one of the parts or system components ceases to work, the system fails. An example would be a home heating system consisting of a thermostat, a source of heat and a heat delivery mechanism (blower). If any one of those components malfunction, the system will fail. The functioning of each component to make the system work is defined by Tubbs (1988) as Dynamic Equilibrium. The desired operation of the system is contingent on all components functioning properly. The operation of the home heating system is also contingent upon one other non-hardware component. That component being changes in ambient air temperature. If the air temperature remains constant at the thermostat setting, there will be no need for the system to work (Kauffman, 1980). Based on the Systems and Contingency theories, a work team can be thought of as a system, with individual members as the components that make it work.

More recent theories incorporating accomplishing of work through teams includes Quality Circles and Total Quality Management (Mondy and Premeaux, 1995).

Quality circle teams, or employee involvement groups as they are frequently called, were developed in Japan in 1962 by Karou Ishikawa. Their purpose was to meet regularly to discuss methods of improving their work, and to improve manufacturing systems (Dobyns and Crawford-Mason, 1991; Rue and Byers, 1986). Many U.S. firms adopted that concept in the 1970s. Quality Circle team members usually are concerned only with their particular area of endeavor. They may have an important impact on their specific tasks, but usually do not greatly impact the total organization (Guzzo and Dickson, 1996).

In 1978, only about 25 organizations used quality circles for problem solving. In 1985, however, ninety percent of Fortune 500 companies reported having some form of quality circle teams (Sherman and Bohlander, 1992). A quality circle typically has six to 12 members who meet once or twice per month to address work connected issues and to develop recommendations for management action (Sundstrom, et al., 1990). The quality circle/employee involvement team usually does not implement suggestions without management approval. Peter (1987) cautions that such things as misunderstanding of the concept of quality circles and failure of organizations to measure results may jeopardize the success of quality circle teams. In the United States, quality circles were a precursor to the Total Quality Management movement (Guzzo and Dickson, 1996).

The concept of Total Quality Management was developed by Walter Shewart in the 1930s and expanded since then by W. Edwards Deming, Joseph Juran, Philip Crosby, et al. (Mondy and Premeaux, 1995). It was founded on the premise that the organization should be totally committed to excellence and that excellence could be achieved through teamwork and a process of continuous improvement (Sherman and Bohlander, 1992).

Total Quality Management differs from quality circles in the respect that it is a philosophical way of life in organizations rather than a problem solving mechanism (Mondy and Premeaux, 1995). Its goal is for employees at all levels of the organization to continually seek methods or technologies to improve existing processes (Wellins, et al., 1991). The implementation of a total quality management program may take five to ten years and require a complete change in the organization's value system (Mondy and Premeaux, 1995).

The widespread introduction of work teams into American organizations did not occur until the mid-1980s. It is believed by some experts that the reason for this slow acceptance is rooted in the scientific management theories of Frederick Taylor. The practice of Taylor's high control management theories prevailed in American organizations for almost a century. The result being that many organizations lost their competitive positions (Wellins, et al., 1991). In contrast, experiments in work team applications were being conducted in other countries. Three of the most notable examples were Eric Trist's studies of British coal miners in the 1950s (Wellins, et al., 1991; Barker, 1993), experiments by Volvo at its Kalmar and Uddevalla plants in Sweden (Sherman and Bohlander, 1992), and Japan's initiation of worker involvement via quality circles (Dobyns and Crawford-Mason, 1991).

Trist found indications of higher productivity and greater job satisfaction among workers who were given greater control over their jobs. His studies also showed that involved and empowered workers were much better prepared to respond to changing market and political conditions than those in traditional organizations (Wellins, et al., 1991).

At Volvo's Kalmar plant, manufacturing defects were reduced by 39% and labor hours by 40% (Sherman and Bohlander, 1992) and production costs by 25% (Wellins, et al., 1991). The Uddevalla plant eliminated the assembly line altogether and used team work stations instead.

Creating Effective Work Teams

Typically, there are three steps in the transition from traditional to self-managed work teams. They are: (1) acquisition of multiple skills, (2) self-sustaining, and (3) self-direction. After the multi-skilling step, teams advance to the self-sustaining stage, securing maintenance, setting schedules and generally functioning with a minimum of outside assistance (Milkovich and Boudreau, 1994). The final stage is the self-directed team, which not only manages the work process but selects new members, provides performance appraisals and performs most activities usually associated with supervisory or managerial duties (Milkovich and Boudreau, 1994; Sherman, Bohlander and Snell, 1996).

The process of multi-skilling is the teaching and qualifying of employees to do one or more jobs, in addition to the one to which they are assigned (Alster, 1989; Wellins, et al., 1994). Providing employees incentives and opportunities to acquire additional skills results in greater flexibility in accomplishing work (Alster, 1989). To be successful, work team members need to be not only competent in more than one technical skill, but require managerial/supervisory skills to function as planners as well as doers of tasks (Meskal, 1989). The accelerated rate of changing technology also requires workers to continue to learn new skills as old one become obsolete (Alster, 1989).

As noted above, when the team reaches the self-sustaining stage, it assumes many of the tasks of the supervisor. That includes scheduling work, ordering materials and attending to day-to-day operating details (Milkovich and Boudreau, 1994). It is at this point that managers should practice fewer management activities and more leadership

activities. The team is starting to function independently and requires minimum direct supervision (Mondy and Premeaux, 1995; Peters, 1987).

In the final stage, self-direction, work teams are empowered to manage all aspects of their responsibility. That includes not only routine production decision but the selection of employees, setting production and quality goals, attending to personnel issues and managing budgets (Milkovich and Boudreau, 1994).

Three elements need to be present for the maximization of team effectiveness. They are (1) task interdependence, the degree of task driven interaction between team members, (2) outcome interdependence, which is the level of reward present and important to all members, and (3) potency, which is the collective belief by team members that they can be effective. The degree to which each of these elements is present directly affects team performance (Shea and Guzzo, 1987).

Task interdependence is the level of work driven interaction that occurs among team members to accomplish work. In some instances, team members work parallel to each other to reach an objective. In other instances, the objective cannot be reached without close interaction among team members (Shea and Guzzo, 1987). One aspect of the self-directed team concept is the absence of traditional supervision. Instead of being told what to do, team members gather and synthesize information (Barker, 1993). This requires member interdependence to accomplish work.

Outcome interdependence is the level to which outcome reward for individual members is dependent upon the outcome of the total team effort (Shea and Guzzo, 1987). Sundstrom, et al. (1990) suggest that total team performance may rely on describable

consequences (i.e. bonuses, recognition) accruing to individual team members as a result of the team's favorable task outcome. An example of outcome interdependence would be the cockpit crew (team) of a large airliner. A major reward to individual members would be the safe arrival at the destination (Ginnett, 1990). Other rewards might be bonuses for a given number of ontime arrivals, recognition for reduction of customer complaints and citations for behavior in emergency situations.

Potency of teams is defined by Guzzo and Shea (1987) as the belief of group members that they can be effective. This potency or confidence can be enhanced by providing feedback (both positive and negat[illegible]) to the team (Sundstrom, et al., 1990) and instilling a sense of ownership of the work in team members (Wellins, et al., 1994). This empowerment improves worker satisfaction and provides a higher quality of work life (Bowen and Lawler, 1995).

A part of establishing effective work teams is staff development. Team effectiveness can be enhanced by increasing the level and variety of knowledge and skills possessed by team members (Mondy and Premeaux, 1995). In addition to the required technical training, teams also receive training in interpersonal, supervisory and decision making skills (Sundstrom, et al., 1990; Peters, 1987). The acquisition of multiple skills is encouraged by organizations using work teams (Denton, 1992; Gibson, et al., 1991; Barker, 1992). In some organizations, the acquisition of additional skills is rewarded with additional compensation (Alster, 1989; Wellins, 1992).

The effectiveness of work teams is usually measured by the output of the team as a whole. This differs from traditional performance measurement which is centered on the

individual employee (Mondy and Premeaux, 1995). In fact, a cause for failure of work teams is the practice of assigning responsibility as a team but measuring performance on an individual basis (Hackman, 1990). Team output measurement includes labor productivity, cost savings, quality and service improvement, shortened production cycles and human resources benefits (Wellins, et al., 1994).

Benefits Attributed to Work Teams

A variety of benefits are attributed to work teams. Developing multi-skilled work teams has been very effective in reducing costs and defects, shortening new product development times and redesigning work processes (Wellins, et al., 1994). Those benefits have occurred at such diverse organizations as General Motors, National Steel, AT&T, Lechmere, Inc., Westinghouse, Colgate, Milwaukee Insurance and Hoechst Celanese Corporation (Denton, 1992; Hill and Jones, 1995).

A typical example of reported benefits from the use of work teams is that experienced by Westinghouse. After initiating work teams, Westinghouse had a 60% reduction in the cost of products, production cycle time was reduced from 12 to two weeks, in process inventories were reduced by 65%, and rework was reduced by 50% (Wellins, et al., 1994).

There are situations where the work team concept is inappropriate (Dyer, 1977) due to the nature of the tasks and does not produce anticipated benefits. There are also workers who prefer traditional direction and do not function well in a work team setting (Woodruff, 1991). At Hoechst Celanese, where work teams have been very successful, a

team assembled to develop and implement a new order entry system was very unsuccessful from an interpersonal relations viewpoint even though the objective was eventually achieved (Maglitta, 1995). There have been many work team successes at General Motors, but work teams at the Van Nuys, California assembly plant produced no improvement in productivity, cost reduction or quality of product (Turner, 1989).

Applications of Work Teams

The most advanced applications of work teams is in the manufacturing sector. This was driven by competitive conditions arising primarily from foreign manufacturers (Rehder, 1994; Tichy and Sherman, 1993). However, those same conditions are expanding into the "white collar" and service industries (Wellins, Bynum and Wilson, 1991). Work teams are now found in such diverse industries as: Healthcare, printing retailing, brewing, specialty foods, pharmaceuticals (Wellins, et al., 1994), electronics, mining (Larson and LaFasto, 1989), insurance, chemicals, customer service, sporting goods, and the U.S. Military (Salas, et al., 1995). This in addition to light and heavy manufacturing applications. Work teams are also present in all levels of organizations. They are found in executive suites, on shop floors and at all levels in between (Hackman, 1990; Sundstrom, De Muese and Futrell, 1990).

Work teams as noted above are found in virtually all industries and at all organizational levels. In some instances they are closely associated with other groups in others, they work alone (Hackman, 1990). This diversity greatly enhances team performance and should be recognized as a valuable component of work teams

(Ofori-Dankwa, 1995). The common characteristics are: They are all real groups in the sense of being an intact social system, having tasks to perform, and operating in an organizational context (Hackman, 1990). They also have participative members, freedom of members to express opinions and ideas, goal involvement and mutual trust and flexibility. The characteristics of effective work teams as defined by Schein (1987).

Team Empowerment

Team empowerment is viewed as an important component of the development of successful work teams (Donovan and Bond, 1994). A study by Leon Kappleman and Tom Richards (1995) of the University of North Texas found that when compared with other employees, workers who were empowered to make decisions and control their work were 88 percent more motivated to take part in organizational change efforts, 146 percent more satisfied with training and 99 percent more satisfied with overall changes. At Milwaukee Insurance, empowered teams permitted elimination of two-thirds of its management positions, Tennessee Eastman now operates with one-half the managers it had before establishment of empowered teams, and at Texas Instruments-Malaysia, eighty supervisors were replaced by eight facilitators because of team empowerment (Wellins, et al., 1994).

The act of telling employee teams they are empowered is insufficient to create an empowered state of mind. The organization must change its culture, reward system, policies and procedures from an orientation of top down management to one of participative management (Bowen and Lawler, 1995). A typical example is the

experience at General Electric where a complete restructuring was accomplished in order to implement the empowered team concept throughout the organization (Tichy and Charan, 1989; Katzenbach and Smith, 1993).

The essence of employee empowerment is contained in Likert's (1967) principle of supportive relationships stating that leadership and other processes in the organization must ensure that all interactions of each member of the organization, based on his/her background, values, desires and expectation, views the experience as supportive of his/her sense of personal worth and importance to the organization.

Work Teams Manage Their Own Operations

Employee work teams are managing entire divisions and taking responsibility for functions at all levels in organizations (McKee, 1992; Santora, 1994). As an example, work teams are found in service industries, manufacturing, warehousing and transportation, engineering, nursing, quality control and farming (Wellins, et al., 1994). Through the use of work teams, organizations have found they can operate with fewer managers (Wellins, 1992). There have been improvements in both quality and productivity at corporations using teams to accomplish work (Byrne, 1993; Sherman and Bohlander, 1992).

Measuring Effectiveness of Work Teams

Guzzo and Dickson (1996) maintain there is no singular, universal measure of team effectiveness. They suggest that team output, the consequence of team membership,

and the enhancement of the team's ability to perform in the future can be measures of team effectiveness.

The 60% reduction in the cost of products, reduction of cycle time from 12 to two weeks, inventory reduction of 65% and rework reduction of 50% at Westinghouse (Wellins, et al., 1994) indicates successful output. The same applies to General Electric's realization of sustained record profits (Welch, et al., 1996).

The employee satisfaction reported at Saturn (Auguston, 1994) reflects success in positive consequences for employees.

The extensive training and acquisition of multiple skills at Saturn (Woodruff, 1992) and General Electric (Frigo and Janson, 1993; Tichy and Sherman, 1993) are indicative of the team's preparedness to perform in the future. The emphasis on acquiring multiple skills (Alster, 1989; Meskal, 1989) in work teams provides assurance that the teams will have the necessary skills to meet future challenges.

CHAPTER III

METHODOLOGY

Introduction

The problem which prompted this study was the issue of some work teams failing to achieve anticipated results. The purpose of the study then was to determine if there existed a group of common activities, or characteristics, which led to the successful implementation of work team programs. To accomplish that objective, an extensive review of published works was conducted to answer the research question: What are the common activities which lead to successful implementation of work team programs?

Characteristics Derived from Literature Section

The review of the literature developed a convergence of characteristics of successful work teams. Those characteristics were: (1) the freedom of team members to express ideas as suggested by Schein (1987) and Likert (1967), (2) the empowerment of team members to take action as suggested by Kappelman and Richards (1995) and Bowen and Lawler (1975), (3) the development of multi-skilled team members as suggested by Denton (1992) and Alster (1989), and (4) the level of training received by

team members as suggested by Peters (1987), Woodruff (1992), and Mondy and Premeaux (1995).

Population and Sample

The population for the study was organizations with successful work teams. The sample selected was the Saturn and General Electric Corporations. The Saturn Corporation was selected because it is a new organization. The General Electric Corporation was selected because it is a mature organization.

Analysis of the Data

An analysis of the data, using the derived characteristics identified earlier, was performed to determine if there were common activities which might lead to the successful implementation of work team programs.

CHAPTER IV

CASE STUDIES

Introduction

In order to provide examples of successful work team programs, two corporations having successful work team characteristics as defined elsewhere in the study were selected for individual literature review. Those corporations were Saturn and General Electric.

The Saturn corporation was designed initially to be operated with work teams rather than traditional manufacturing practices. The initial staffing included selection based on attitude, behavior traits and the perceived ability to thrive in a work team environment.

In contrast to Saturn, a shift from traditional practices to work teams was accomplished within General Electric. This shift from tradition required a corporate culture change and was met with resistance from middle management.

Saturn

The Situation

The situation, according to Rehder (1994), was that during the early 1980s General Motors, Ford and Chrysler had lost and were continuing to lose market share to the Japanese auto industry. This "big three" of American automakers had been unsuccessful at building a small car to profitably compete with Japanese imports. General Motors alone had closed plants and laid off hundreds of thousands of workers. This had the direct impact of greatly weakening the power base of the United Auto Workers Union.

Faced with this dilemma, very high ranking officials at General Motors (Al Warren) and the UAW (Donald Ephlin) formed a study team to determine how to build a world class automobile (Sherman, 1993). The team, dubbed the group of 99, was comprised of both union and non-union members and was given the task of determining how to build an American automobile that could successfully compete, worldwide, with Japanese automobiles (Solomon, 1991).

Field Studies

During field studies, the team developed a list of items perceived to be required of a highly successful company. The list included:

*Quality as being a top priority. The customer, whether internal or external, was number one.
*"Everyone in the company has ownership and is responsible for its successes and failures.
*Equality is practiced, not just preached.
*Barriers to doing a good job have been eliminated.
*People are the company's most important asset.

*Union and management are partners, sharing responsibility for ensuring the success of the enterprise.
*People have authority to do their jobs" (Rehder, 1994, p. 7).

Based upon the findings and recommendations of the group of 99, the Saturn Corporation was found in 1985 (Linton and Churitch, 1993). Its organization was focused on the single mission of manufacturing and marketing vehicles in the United States that could compete worldwide on the basis of quality, cost and customer satisfaction. This was to be done through the integration of people, technology and systems.

Premise

An initial premise was that the new automobile could not achieve the desired objective within another General Motors division, within existing General Motors philosophy, or even within existing General Motors facilities (Aaker, 1994). It was to be totally separate from the parent in location, philosophy, design and manufacturing, work methods, marketing strategy and retailing methodology.

Site Selection

Site selection was based more on people issues than on the more common criteria of financial and logistical considerations (Sherman, 1993). It was for this reason Spring Hill, Tennessee was chosen as the location for the new plant (Rehder, 1994). The human factors considered important to the site selection included attractiveness or livability,

state and local business climate, proximity of quality higher education opportunities and availability of employee training facilities (Lewandowski and MacKinnon, 1992).

Staffing

The collective bargaining agreement between Saturn and the UAW stipulated that all Saturn employees would be drawn from the ranks of existing or laid-off General Motors employees (Sherman, 1993). In exchange, Saturn was allowed to hand-pick the employees selected based on its own criteria and exclusive of consideration of seniority (Geber, 1992).

Recruiting teams went to General Motors plants and explained the Saturn goals and strategies to be used in achieving those goals (Sherman, 1993). Workers wishing to apply for a job at Saturn were required to complete an extensive application form which probed not only for technical skills but for attitudes and behaviors as well (Geber, 1992). Saturn management was looking for workers who could thrive in teams and who believed in Saturn's Mission Statement.

Training

Before production started on the Saturn, each member of the initial employee group received 300 to 700 hours of training. Much of this was in basic skills such as conflict management, problem solving and interviewing techniques (Woodruff, 1992).

The company expects its employees to spend at least 5% of their time in training each year (Meskal, 1989). A 30 member training and development department

administers core courses that all Saturn employees are expected to take. At the time of start-up, the company had approximately 900 individuals doing some type of training (Oz, 1994). A sophisticated education tracking program records both classroom and on-the-job training of employees.

Union Response

The concept of cooperation between unions and management was well established before the decision to build the Saturn automobile was reached. The labor agreement signed between the United Auto Workers and Saturn was predicated on a cooperative, not adversarial, relationship (Solomon, 1991).

It became evident to management in the late 1970s that increased productivity would not be adequate to close the competitive gap in many industries. Based on their own assessments of competitive conditions, unions agreed to wage concessions and constraints in increases (Walton, 1984). In exchange, unions extracted more influence in what had previously been management decision.

The original Saturn employees were hand-picked from current and laid-off workers as stipulated in the labor agreement. They were not picked on the basis of seniority. The agreement does, however, include permanent job security for the original group of Saturn employees (Monthly Labor Review, 1985). As team members were hired, they were empowered to participate in the selection of subsequent team members.

There have been incidents of dissension between labor and management at Saturn. On one occasion workers exercised their freedom of expression by demonstrating their displeasure with management's attempt to increase output at the expense of quality.

Employee Response

The initial group of Saturn employees (as noted earlier) was hand-picked after careful screening. Because of this selection process, they joined the Saturn project voluntarily and with positive attitudinal traits as determined by responses to an extensive application questionnaire (Geber, 1992). Those employees hired later were from the rolls of workers laid-off from other General Motors plants (Filipczak, 1993). Their motivation was a forced need for a job to maintain their livelihood.

A manifestation of empowerment appears in employee comments such as: trying to find a way to use one less employee, feel what we are doing does make a difference, and we can make minor repairs ourselves or call on team members for assistance in more complicated matters (Auguston, 1994).

In a 1991 survey, 6% of employees said they were unhappy at Spring Hill (Woodruff, 1991). Some of the dissatisfaction was typical of any relocation such as split families and unsold homes. A problem more unique to Saturn was the inability of some employees to adapt to the team concept.

In 1993, 29% of workers voted to return to traditional, adversarial labor relations. Much of this unrest in attributed to the fact that more recent hires have come from the ranks of laid-off employees from other GM plants (Filipczak, 1993). Those workers tend

to be less enthusiastic about the Saturn philosophy and come to Saturn for the job (Woodruff, 1993). Other causes were the reduction in training hours which reduced training in cooperative work methods, burnout from long work weeks and a growing distrust of the union's close ties with management.

Work Teams

Saturn's work force is structured into self-managed teams with each having six to fifteen members, depending on its scope and responsibility (Solomon, 1991; Hoglund, 1986). The teams are empowered to assign their own jobs, plan their work, schedule relief and vacations, provide replacements for absentees, design work methods and establish and ensure behavior norms consistent with Saturn's mission (Auguston, 1994).

The Saturn model for making decisions and taking action doesn't require that every person in the group agree with a decision 100 percent (Geber, 1992). The objective is for every member to be at least 70% comfortable with the decision but, when it is reached, to support it 100 percent (Solomon, 1991).

Business Units

The business units are Powertrain, Body Systems and Vehicle Systems (Sherman, 1993; Geber, 1992). The Powertrain unit builds engines and transmissions. The Body Systems unit forms plastic and steel to fit the car and paints those components before assembly. The Vehicle Systems unit performs final assembly (LaBar, 1994; Rehder, 1994).

Management

The Manufacturing Advisory Committee oversees operations at the entire complex. It includes both union and management representatives from each business unit, the overall site manager and his union counterpart. At the top is the Saturn Action Council, the long-range planning and policy making body for the company (Geber, 1992).

Marketing

In order to set itself apart from other car makers, Saturn chose to market the company instead of the vehicle. The logic was that any advertising of the features of the Saturn automobile would be lost in the advertising of features of all other automobiles (Aaker, 1994). To establish credibility and belief that Saturn was truly different, advertising featured employees as individuals with personalities and a strong commitment to building a quality product (Fierman, 1994).

General Electric

The Situation

The General Electric Corporation was founded in 1878 by Thomas A. Edison and Grosvenor Lowery as the Edison Electric Light Company. In 1892, the company merged with the Thompson-Houston Electric Company to form the General Electric Company (Mirable, 1995). Today, G.E. is an aggregation of independent businesses producing jet

aircraft engines, plastics, lighting equipment, locomotives, major appliances, power generating equipment and medical diagnostic systems (Stewart, 1991). It also provides broadcasting, financial and information services and industrial systems design. Its annual revenues are $60.6 billion and it has 222,000 employees (Standard and Poors, 1995). In the early 1980s, annual revenues were $30 billion and employment was 435,000 (Doyle, 1995).

As noted earlier, Saturn by design divorced itself from the General Motors bureaucracy (Aaker, 1994). General Electric's CEO, John Welch, by contrast, elected to change that same type bureaucracy within his organization (Tichy and Sherman, 1993).

In 1981, when Welch was selected as G.E.'s CEO, the company faced low productivity and global competition. By the end of 1982, Japanese manufacturers had captured 20% of the U.S. steel market and 23% of the U.S. automobile market. It was also making strong advances in the consumer electronics field (Slater, 1993). Welch recognized these circumstances as a threat to the survival of General Electric. He then set about changing the business structure of the company (Tichy and Sherman, 1993). One of Welch's early strategies for G.E. was to be number one or number two globally in each of its businesses (Katzenbach and Smith, 1993).

An early step by Welch was to eliminate layers of bureaucracy and restructure the organization into fourteen business units (Tichy and Charan, 1989). The business unit teams have almost total freedom and empowerment to operate their businesses (Doyle, 1995). They are governed by their performance rather than hierarchical edict (Stewart, 1991).

The Boundaryless Company

One element of the vision Welch had for the organization was a boundaryless company. The idea being to remove barriers separating constituencies internally, externally, vertically, horizontally and geographically (Welch, 1994). This is the team empowering concept applied organization wide (Frohman, 1995). It includes external suppliers of goods and services as well as internal producers/suppliers of goods and services. The achievement of that goal required an unprecedented cultural change at G.E. (Tichy and Sherman, 1993). The ultimate objective was to grant freedom to employees and to destroy walls which inhibit creativity, waste time and foster corporate bureaucracy, which in turn reduce productivity (Katzenbach and Smith, 1993).

Workout

There was resistance by middle and lower level managers to the delegation of power and decision making authority to employees through the concept of a boundaryless organization (Tichy and Sherman, 1993). To combat that resistance, G.E. developed a program called Workout (Welch, Fresco and Opie, 1996; Tichy and Sherman, 1993).

The concept of Workout was developed as a result of a routine visit by Welch to G.E.'s training center. The open forum with employees attending training sessions surfaced the same complaints he had heard on similar visits with other groups. The change to the new culture was not practiced at lower levels in the organization (Slater,

1993). Welch did not believe managers were more creative or had better ideas than the people closest to the work.

The Workout program entails bringing groups of people together in off-site problem solving meetings (Frigo and Janson, 1993). The boss of that particular group meets with them, and with the help of a facilitator, the group identifies problems which need resolution. The boss is then required to leave and the subordinates form small teams to work on solutions (Tichy and Sherman, 1993). Welch made it clear to managers in the beginning that any obstruction of the Workout program would be viewed as a career limiting move (D'O'Brian, 1991).

Staffing

In contrast to Saturn, which was building staff, General Electric reduced its staff by over 100,000 employees (Doyle, 1995). To smooth the transition for those leaving the company, pension benefits were made more portable and health and life insurance coverage was extended for a full year after termination.

Union Response

The response of unions was a begrudging acceptance of what appeared to be inevitable (Slater, 1993). The 1982 labor contract included generous benefits for those employees involved in transfers or layoffs. At that point, union members agreed that some jobs were better than no jobs at all.

Training

General Electric maintains a training center at Crotonville, New York. It has been referred to as the "Harvard of Corporate America" (Slater, 1993). On any given day, there may be 150 employees from all organizational levels and geographic areas taking courses at Crotonville. The company spends between $300 and $500 million on employee training each year (Doyle, 1995).

Work Teams

As the concept of Workout caught on, some individual business units changed their name to "Empowered Process Ownership Teams" or "High Involvement Teams" (Slater, 1993). The productivity improvement in the business units, in many cases, was beyond expectation.

The emphasis on productivity gains through empowering people is stated by Corporate Vice President, Frank Doyle. "People, and productivity growth through people, are increasingly the winning edge determining the competitiveness both of companies and countries" (McClenahen, 1991).

Research Question

The research question: "What are the common activities which lead to successful implementation of work team programs?" is answered, at least in part, by the findings of the study.

Four measurements were used to determine if common activities of successful work teams existed. They were: (1) freedom of team members to express ideas; (2) the empowerment of work teams to make decisions and take action; (3) the possession of multiple skills by team members; and (4) the level of training received by team members.

Analysis of Case Data

An analysis of the data provided in the case studies revealed that:

(1) Team members at Saturn and General Electric had freedom to express ideas. The team concept was incorporated by design into those organizations to foster employee participation in their daily operations.

At Saturn, the decision making model requires that at least 70% of team members be comfortable with a decision before it is implemented. The General Electric Workout program was developed to assure that work teams had a voice in the decision making process.

(2) In addition to receiving the freedom to express ideas, the work teams at Saturn and the restructured General Electric were empowered to make decision and take independent action. Saturn teams were empowered to assign their own jobs, plan their work, schedule member time off, determine work methods and perform other duties which are performed by supervisors in traditional organizations. An example of empowerment at General Electric was the selection of over $20 million worth of new milling machines by teams at the Schenectady, New York turbine plant.

(3) Team members at both corporations were encouraged to develop multiple skills. There was no indication that direct compensation was provided for new skills acquired. However, generous opportunities to develop new skills were provided at no cost to team members. The initial Saturn employees were selected not only for their technical skills but for their interpersonal, management and adaptability skills as well. The boundaryless company concept was implemented at General Electric to facilitate the development of multiple skills across department lines by team members.

(4) Extensive training was provided for team members at both Saturn and General Electric. A certain minimum amount of training was required at Saturn and strongly encouraged at both corporations. General Electric's annual employee training costs were in the $300 to $500 million range. G.E. maintains a corporate training center at Crotonville, New York for ongoing employee training. At Saturn, each member of the initial employee group received 300 to 700 hours of training before production started. Saturn employees are expected to devote 5% of their work time each year to training.

In addition to the four characteristics noted above, management support was found as a common characteristic in both organizations. The Saturn project received total support from General Motors CEO, Roger Smith, and Industrial Relations Vice President, Alfred Warren. CEO John (Jack) Welch took a very proactive stance in implementing the work team concept at General Electric.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary

The problem prompting this study was the issue of some work teams failing to achieve anticipated results. This led to the purpose of the study, that being to determine if there existed a group of common activities shared by organizations which had implemented successful work team programs.

The practice of using work teams to accomplish work is growing in popularity. Work teams are performing many of the tasks that are delegated to supervisors in traditional organizations. In certain applications, work teams have increased productivity, improved quality and reduced costs of doing business. There are a number of different types of work teams, each established for a specific purpose or to fill a specific need.

The concept of work teams is not a new phenomenon. As early as 1927, the Hawthorne Studies conducted by Dr. Elton Mayo and associates indicated that the success of work teams was attributable to the members sense of group identity. The freedom of team members to express opinions and the empowerment of teams to make

decisions and take action serves to enhance that sense of group identity in successful work teams.

There are situations, however, where work teams are not the most effective method of accomplishing work. In some instances, work teams are not successful because managers are unwilling to commit the required resources to implement work team programs. In other instances, work team programs may be unsuccessful because the concept is viewed by workers and supervisors as nothing more than this year's management program.

The literature indicates that some common characteristics, or success factors, of work teams are the freedom of team members to express ideas, the empowerment of team members to make decisions and take action to accomplish their work, the development of multiple skills in order to perform more than one task in their assigned responsibility, and the training of team members.

In order to be more effective, work team members must be free to present ideas to management and to other team members. It is the synergy derived from this free exchange of viewpoints and ideas that causes work teams to be more effective than individuals working separately in achieving productivity improvement.

In addition to providing collective ideas, work teams must be empowered by management to act upon the ideas developed. A requirement that all decision be approved by management before action is taken defeats the purpose and benefits of work teams.

The development or possession of multiple skills by team members is considered to be an important contribution to successful work team applications. One reason

possession of a number of skills by team members is important is that it provides flexibility in assigning work. If a team member is absent, a multi-skilled member who possesses the skill of the absent member can perform the required tasks and production is not impaired. A second reason that having members with multiple skills is important is that fewer members are needed to perform all tasks required to complete the total job.

To reach their full potential, work teams must be well trained in decision making, conflict management and supervisory skills in addition to technical skills. The responsibility of work teams include activities attended by supervisors in traditional organizations. It therefore becomes very important to their success to receive appropriate training in those additional disciplines.

The establishment of the Saturn Corporation was driven by General Motors' need to stop its declining market share. The major concern was G.M.'s loss of market share to Japanese competitors.

The changes at General Electric were driven by the new CEO, Jack Welch's, perception that G.E. would lose market share if it continued on its present course. Like General Motors, General Electric also faced global competition and had low productivity when Welch became CEO in 1981.

Summary of Findings

Based on an analysis of the study, it was found that successful work teams shared five common characteristics. They were: (1) work team members are free to express ideas; (2) work team members are empowered by management to make decisions regarding their work and to take independent action on those decision; (3) work team

members possess multiple skills; (4) work team members receive extensive training; and (5) successful work teams have strong management support.

Conclusions

Based on the data of this study, it was concluded that the success of work teams is enhanced when all stakeholders are committed to the process.

Further, it was concluded that an organization should not initiate a work team program until a careful analysis of its needs has been completed. It should also carefully plan each implementation step and should seek employee participation in the planning process.

Recommendations for Further Study

Based on this study, it is recommended that: (1) there be a study to identify principles of work teams; (2) a longitudinal study of Saturn and General Electric be made to further clarify the functioning of work teams in those organizations; and (3) studies be conducted at organizations where work teams have been unsuccessful to determine: (a) if the common activities of successful work teams identified in this study were present and (b) if there were common behaviors that contributed to the lack of success of the programs studied.

Recommendations for Practice

Based on the study, there are three recommendations for practice for organizations contemplating implementing work teams: (1) Send teams to other

organizations using work teams and adopt their best practices; (2) Borrow from the principles of Total Quality Management by managing processes, not people, striving for continuous improvement, relying on customer satisfaction as the main gauge of performance and developing a clear vision of their mission; and (3) Human Resources Development specialists should expand their knowledge of the concept of accomplishing work through teams. They should be especially knowledgeable of the common characteristics of successful work team programs. They should also be aware of and help management to understand that the work team approach is not a final answer to all productivity concerns.

In addition to the above recommendations for practice, management should also be prepared to address other more subtle work team issues.

There are situations where work teams are impractical. In such solitary activities as medical research or genetic analysis where one individual must know and fully understand all behaviors and variables, work teams may prove less effective. Management should examine each situation thoroughly to assure that function is conducive to achievement by work teams.

There may be resistance to work teams by incumbent supervisors. The reason being that they are perceived as a threat to the supervisor's job. In a traditional sense, that perception has merit. Self-managed work teams perform supervisory duties as well as technical tasks. Management may wish to overcome that resistance by including supervisors in the initial planning and implementation process. Management may also wish to take positive steps to assure each incumbent supervisor that he or she will be retained in the organization or receive a generous severance package.

There may also be passive resistance to the work team concept because of the perception that it is merely "this year's management hot button". There is also merit to that reaction because too often a high ranking executive reads a book or attends a seminar touting some "cure-all" management practice. He or she then directs subordinates to implement the practice and pays it no further attention. Before the work team concept is implemented, the Executive team should agree on its merit and then make a long term organizational commitment to assuring its success.

Department turf issues often inhibit the success of work teams. Team activities such as planning work, purchasing materials and developing new methods of manufacturing may be strongly resisted by the engineering, planning, and materials management groups. These issues should be resolved through meetings with management where departmental input is encouraged and affected support employees receive complete information on the work team implementation process.

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APPENDIX

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 04-07-95 **IRB#:** ED-95-066

Proposal Title: CHARACTERISTICS OF SUCCESSFUL WORK TEAM PROGRAMS

Principal Investigator(s): William Venable, James H. King

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:  Date: April 11, 1995

Chair of Institutional Review Board

VITA

James H. King

Candidate for the Degree of

Master of Science

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