

# Y-12

## OAK RIDGE Y-12 PLANT

**MARTIN MARIETTA**

### Are Self-Directed Work Teams Successful and Effective Tools for Today's Organization?

A. D. Arnwine

Health, Safety, Environment  
and Accountability

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MANAGED BY  
MARTIN MARIETTA ENERGY SYSTEMS, INC.  
FOR THE UNITED STATES  
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**ARE SELF-DIRECTED WORK TEAMS SUCCESSFUL  
AND EFFECTIVE TOOLS FOR TODAY'S  
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A. D. Arnwine

March 1995

**MASTER**

Prepared by the  
Oak Ridge Y-12 Plant  
Oak Ridge, Tennessee 37831  
managed by  
Martin Marietta Energy Systems, Inc.  
for the  
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## ABSTRACT

The purpose of this research is to (1) show the effectiveness and success of self-directed work teams within the organization, (2) emphasize the importance of team building in the success of the team, and (3) assist organizations in building self-directed work teams.

The researcher used a direct survey and studied the following team building techniques: (1) Is the team's mission clearly defined to each team member? (2) Are the goals clearly defined and achievable by all team members? (3) Will empowerment (decision-making power) be given equally to all team members? (4) Will open and honest communication be allowed among team members? (5) Will each team member be respected and valued for his/her position on the team? (6) Are self-directed work teams effectively rewarded for accomplishments? (7) Have team members received adequate training to effectively complete their job tasks?

Upon completion of the literature review and statistical data, and after analyzing the seven areas of team building techniques, it was determined three of the four teams were successful and effective. The only area of concern to the organization is that the participants felt they did not have true ownership of their teams; that is, team members were not given full empowerment.

According to this study and the review of literature, full empowerment must be given to achieve successful and effective teams. If true empowerment is not given, the team will suffer in other areas of team building, and the organization will lose a valuable tool.



## 1. INTRODUCTION

This section reviews existing literature on self-directed work teams. The review includes background information on self-directed work teams and important components needed for a successful team. It discusses avoidable actions that may cause team failure.

This section also describes team building, training, planning, work transition, work design, and rewards management. A problem is stated and a study that was conducted based on the stated problem is discussed.

Section 2 describes methods used in research design, sample selection, questionnaire development, procedures used, and data analysis.

Section 3 analyzes the results in descriptive detail.

Section 4 includes a summary of major findings and the researcher's recommendations.

### 1.1 BACKGROUND

Randall Capps (1993), professor of communications at Western Kentucky University, researched the idea of suddenly changing from the traditional work environment to implementing self-regulated teams instead of using the progressive approach that most companies use. Research was conducted at Great Britain's Tavistock Institute of Human Relations in the 1950s with the socio-technical systems theory, better known as self-directed work teams. The study suggested using a sudden approach of implementing a self-regulated work style instead of a phasing-in process over a period of 2 to 5 years.

Capps' research was conducted on coal miners who were placed in small groups supervising themselves. Worker empowerment was created, along with job rotation and common pay rate sharing. Workers in this experiment achieved reduced absenteeism, fewer accidents, lower turnover rates, fewer stress-related illnesses, and higher productivity.

Capps found a company, Inglis Limited of Montmagny, Quebec, facing bankruptcy unless management could turn the company around. The Tavistock Institute concept of socio-technical systems was adopted by the 100-employee company. The company closed for renovation and when it reopened 4 weeks later, the concept was implemented suddenly. The process approach was not used. Within 6 months, the Montmagny factory was the most profitable of the five factories Inglis owned. Inglis Montmagny made a sudden change from traditional management to the socio-technical theory the first year as a transitional period (Capps, 1993).

## 1.2 REVIEW OF LITERATURE

The scope of this literature review consists of the following topics: background information, transition, team building, work design, rewards management, team skills, reasons for self-directed work team failure, effectiveness of self-directed work teams, and examples of effective and productive self-directed work teams.

Dr. Sandra Donovan (1993) analyzed ways to improve organizational dynamics by knocking down organizational walls. She wanted to show that employees can move beyond organizational walls with work teams and be successful. Donovan lists six steps to aid in this transition: (a) form cross-functional teams (avoid organizational charts); (b) adjust rewards and recognition to gain the response you desire, (e.g., management and peer recognition, certificates, plaques, award luncheons and dinners, and monetary compensation); (c) build trust between the team and the organization by treating each other with dignity and respect; (d) involve employees and share concerns; (e) train employees, and (f) provide team support. Donovan put these steps to work when she was executive of Johnson and Johnson. Eleven action teams were formed. Immediately, employee morale went up, company costs were lowered, and work quality improved. Donovan became the team's facilitator and took on the responsibilities of coaching, counseling, and supporting. She filled this role until the teams became established. Then, she slowly removed herself from the teams. Donovan strongly believed that the new relationship between management and employees benefited everyone because of team work (Donovan, 1993).

### 1.2.1 Team Building

Richard Wellins (1992) reviewed how to design teams for success, the selection of team members, training for successful and effective leadership, and rewarding team performance. The purpose of the article was to emphasize the correct way to build self-directed work teams. Wellins listed the following questions an organization must consider before starting self-directed work teams:

1. Where do we begin?
  2. What type of training will be needed?
  3. What effect will self-directed work teams have on our work and jobs?
  4. What will be the role of support departments?
  5. How will the responsibilities be divided between leaders and teams?
- (Wellins, 1992)

The following six steps provide guidance to organizations in implementing self-directed work teams.

- Educate yourself on self-directed work teams. One good way is to visit an active self-directed work team and take notes.
- Determine whether self-directed work teams are right for your environment.
- Talk to your employees and obtain their input on the idea.
- Conduct a work-place redesign to see if self-directed work teams are the answer for your company.
- Implement self-directed work teams with open communication, good leadership support and, most importantly, training.
- Continue to evaluate the progress of the team and make adjustments as needed (Wellins, 1992).

Wellins reported that Development Dimensions International conducted a recent survey, along with *Industry Week Magazine* and the Association for Quality and Participation, that showed 25 percent of U.S. companies were implementing self-directed work teams. The survey also showed that the companies already using self-directed work teams maintained or reduced labor costs, while productivity improved by 50 percent or more. According to Wellins, self-directed work teams are one of the most powerful tools within an organization.

Stoner and Hartman (1993), professors of management at Bradley University in Illinois, also dealt with the importance of team building and the key components for making self-directed work teams successful. As self-directed work teams were implemented, traditional management took a back seat. This unleashed many tough questions and problems for the traditional organization and the employees. To ease the team building transition, management hired a facilitator to determine which areas were the most important and to help team members understand the process. The facilitator stressed identifying needs, developing the necessary skills, and creating an environment where team members can ask tough questions. Trust was named as the most important component in team building. Trust between team members and management and among members with their peers was vital. Stoner and Hartman concluded that the team concept is not new. Team building requires a skilled approach, especially when organizations are faced with key questions posed by team members. They felt that teams would re-energize organizational America.

Matthes (1992) reviewed interpersonal skills among team members and how their behavior affected the team's success. She stated that teams usually consist of many different personalities and attitudes. Effective teams try to understand their members' personalities and work together to accomplish the organization's goals. It is important to train individuals as they form teams. A team can focus on tasks, goals, and technical areas, but leaving out interpersonal skills will cause the team trouble. Team members often see themselves as individuals rather than as team

members. Holding awareness sessions, setting ground rules, and appointing a facilitator to help guide the team are effective preliminary steps. It is important to note that the facilitator is not part of the team and should only coach and support the team. When the team starts to progress, the facilitator should slowly break away from the team. It is also important for the employer to provide interpersonal skills, problem solving, active listening, and effective feedback training for the team to show successful results.

According to an article in *Inc.* magazine (1992), Tom Pechacek, general manager of Displaymasters, noted that his employees resisted empowerment and self-direction. He found they did not like change. He said some employees wanted to be told what to do. He said the purpose of empowerment and self-direction was to flatten the organization, eliminate the middle managers, and allow teams to directly associate with their customers. The company stood to gain \$10 million in revenue that year because of self-directed work teams and empowerment. Ann Marie Fasching, head of Displaymasters' customer service team, asked employees to write down and discuss why they were a team, what they expected from their team leader, and what they expected from their team members. This process helped the team members realize they were responsible for solving their own problems. The team went on to more difficult problem-solving tasks that resulted in success with their customers.

### **1.2.2 Work Design and Rewards Management**

Sam Johnson (1993), compensation consultant at the Wyatt Company, researched the prevalence and practices of self-directed work teams in the northeast region of the United States. He defined self-directed work teams as a group of employees, five to ten, with shared responsibilities of planning and executing the work. Each team member is given work duties on a rotation basis and is responsible for the results. A survey was conducted to determine if self-directed work teams in several organizations were successful and effective.

The Wyatt Company mailed structured questionnaires to a qualified list of companies in seven states. The results showed that of the 35 companies that had work teams, companies with the smallest (fewer than 500) and largest (10,000 or more) employee population reported a prominent frequency of work teams. The majority of the participants had implemented work teams in the past year (9 companies) or two (15 companies). The most frequently cited reasons (20 companies) for self-directed work teams being introduced were to improve quality and to increase customer satisfaction.

Fourteen companies indicated that half of their employees belonged to self-directed work teams. Thirteen companies reported 21 or more work teams. Twenty-three companies reported that the average team consisted of five to ten members. Nine companies reported work teams that had direct and indirect labor. Nine companies had direct and indirect labor plus support personnel on their

work teams. In 15 companies, responsibilities were shared among team members and supervisors for employee discipline, performance appraisals, and budget preparation.

Four companies studied the potential for a pay-for-knowledge plan. Seven other companies were contemplating group incentives. Twenty-one companies (60 percent) reported the overall effectiveness of the work-team rewards program as only neutral or worse. Six of the 13 companies that reported an effective rewards program used some form of group incentive.

Thirty-one of the 35 organizations stated that work-teams are likely to increase in their companies. This was a strong endorsement for the continued growth of self-directed work teams. The survey results clearly showed that the use of self-directed work teams had been rewarding. Johnson stated that through findings and related experiences, it was proven that work teams enhanced an organization's effectiveness through reward systems and that traditional reward systems will not work in a nontraditional work environment. (Johnson, 1993)

Tony Kulisch (1993), professor of management, and David Banner (1993), professor of leadership, University of the Pacific, Stockton, California, also reviewed self-directed work teams and their relationship with traditional work groups, in that the team makes and controls the management process of planning, organizing, directing, and staffing instead of the first-line manager. When examining team design, a team usually consists of 6 to 15 employees with a well-defined mission. Significant groundwork and self-analysis must occur before self-directed work teams can be put into place. It is also important for a new team to visit a well established successful team to gain knowledge. Choosing the right people as team members is also important to the success of the team. Teams tend to move through five stages of development over a 2-to-5-year period. Before the development stages begin, the team needs three types of training: communication, administrative, and technical. Listed are the five stages of development:

1. Implementation - plan from management given to team
2. State of confusion - communication skills, work expectations
3. Tightly-formed work teams - work team resolving intergroup conflicts
4. Leader-centered work teams - how to lead, consensus problem solving, delegation, and administrative skills
5. Self-directed work teams - putting learned knowledge to work

Compensation was also viewed as an important part of a team's design. A question most asked is "What's in it for us?" Kulisch and Banner stated that the natural answer would be increased control, responsibility, and opportunity for



creativity. This might be an effective incentive for some employees, but when the team reaches stated goals the company can reward by pay-for-skills or pay-for-knowledge. Kulisch and Banner also stated that the needed skills, training, testing, and wage increase decisions should be made by the team.

A successful work team must be designed and set up properly. If the company wants to benefit from self-directed work teams, time, effort, and money must be spent to achieve this goal. Short cuts may jeopardize the success of the team and cause the team to fail. The whole philosophy of self-directed work teams in the organization would be lost.

### 1.2.3 Team Skills

Douglass and Douglass (1992), authors of *Time Management for Teams*, reviewed their technique for making team planning simple and effective. They said it is important for everyone on the team to understand the goal and to be involved in the planning process. Each team member's skills and knowledge should be used for the success of the team. The authors shared a simplified approach to planning. They stressed the importance of not trying to think of every step in sequence. Instead, they suggested jotting down ideas on index cards in whatever order they come to mind. Once all the ideas are written down, sort the index cards in the order they must be completed to meet the deadline. This process, they say, will simplify team planning and cause less stress on the team.

C. Hamilton (1992), program director for ODT Inc., reviewed the importance of training self-directed work teams. She believed that training was vital in analyzing the possibilities of self-directed work teams. She said two major steps must be followed to achieve a successful work team. First, a plan must be put into place for easy transition from traditional management to self-directed work teams. The second and most vital step is training. In a team setting all members must learn to communicate with their peers in a constructive manner. They must learn decision-making skills, leadership skills, and the technical skills needed to perform the job. These skills will add strength and confidence to the team. Hamilton felt that team members' feedback was a big part of a successful team and that exercising correct feedback in a learned behavior is essential. Hamilton stressed that feedback should be direct and between those concerned, that receiving feedback is not the same as problem-solving, and feedback should be given to one person at a time, not to the team as a whole. Team members should encourage open lines of communications. While private feedback is encouraged and expected as teams gain skill and trust, teams should have regular group opportunities for feedback with a trained facilitator present. Hamilton said proof of the effectiveness of self-directed work teams will appear in productivity, quality, and customer satisfaction.

### 1.2.4 Why Self-directed Work Teams Fail

Robert Doyle (1992), president of Delta Management Group and author of *Gainsharing and Productivity*, believes that an organization will not be strong or competitive without effective self-directed work teams. He reviewed three ways self-directed work teams fail. He said labeling self-directed work teams as "self-managed" or "autonomous" work teams jeopardizes the teams. "Self-managed" implies that work teams supply their own direction. Such teams should be labeled "goal-directed."

The second reason self-directed work teams fail is not recognizing the need for stronger leadership. Good leadership requires training in leadership skills. When leaders do their jobs, the group will be responsible, committed, goal-directed, and arranged in a refined organization.

The third reason for team failure is that traditional reward systems do not support team-based organizations. Rewards should be based on teamwork, team achievement, and individual rewards and recognition. Doyle would like to see self-directed work teams called high performing work teams. He stressed the importance of devoting much time to developing leadership skills and revising the pay/rewards system to include rewards for teamwork and learning.

### 1.2.5 Measuring Effective Self-directed Work Teams

Victoria Hoenemeyer (1993) reviewed the effectiveness of self-directed work teams and the importance of assessing the success of a team. She listed four areas of concern when measuring a team's effectiveness. An effective team will:

- free up the manager from everyday details;
- provide timely customer service;
- have a higher morale, productivity, and job pride; and
- work together, not against each other. (Hoenemeyer, 1993)

Hoenemeyer used a team inventory to help a team periodically measure its effectiveness in these five areas: (a) team mission - every team should have a mission, and it should reflect the mission of the organization; (b) goal achievement - team should establish team goals, ensure progress toward meeting these goals, and attain them; (c) empowerment - team is given the authority, responsibility, and accountability that it needs to get the job done; (d) open, honest communication - everyone on a team must be able to communicate openly and honestly with each other without being afraid to tell the truth; and (e) positive roles and norms - work is assigned based on team strength. This inventory should be given to team leaders and team members to compare their perceptions of the team. The likenesses and differences should be totaled and then discussed. The

most effective teams are those that excel in all five areas. When the five areas are in place, employees feel proud of their accomplishments. Customers receive high-quality service, and the end result is that the company accomplishes its mission (Hoeuemeyer, 1993).

### 1.2.6 Effective and Productive Self-directed Work Teams

Charlene Solomon (1991), a freelance writer, reviewed the success of self-directed work teams at the Saturn Corporation. The company's experiment with self-directed work teams began with the establishment of Group 99. The group's mission was to study other organizations with top-performing success. The group's finding showed that employees did their best when they were included in the decision-making process. The idea was given to the Saturn production facility in Spring Hill, Tennessee. Management wanted the employees to accept ownership for the labor tasks they were performing. Joseph Rypkowski, Vice President of the United Auto Workers, wanted the employees to approach their jobs like they would a task in their personal lives. The company wanted self-directed work teams empowered in the decision-making process, using the consensus method. The company established 150 work teams of 15 employees each. For more complex work, smaller teams of 6 to 12 were used. The company's mission statement was clear to the employees. The employees were willing to get involved in the decision-making process, but all were not qualified. Therefore, the company initiated an elaborate training program, providing 800,000 training hours for 2,000 to 4,000 employees. Management believes that training played a vital role in the success of the team. The Saturn Corporation was named *Personnel Journal's* Optimas Award winner for management change.

Jana Schilder (1992), a consultant in Toronto, reviewed how work teams keep companies competitive by boosting productivity. The use of self-directed work teams empowers employees with more responsibilities and allows them to make decisions management used to make. In one example, the team began to order material, schedule overtime, calculate productivity, review budgets, and interview possible new team members. As the team advances, they will conduct peer performance reviews and provide employee corrective actions.

A recent survey of 476 *Fortune* 1,000 companies published by the American Productivity & Quality Center in Houston showed that only 7 percent of the work force uses self-directed work teams. Half the companies indicated they would be implementing them in the near future.

Schilder supported the concept of self-directed work teams and showed examples of how they boosted the company's productivity by a significant amount. She stated that Jack Bergman, president of Competitive Concepts in Wilmington, North Carolina, believes self-directed work teams were the best tool for achieving quality customer service. When Bergman used the self-directed work team tool at General Electric, productivity increased 250 percent. As a result, 20 percent of all General Electric employees now work under the team concept.

Schilder found that in 1987 Debra Boggan, plant manager of Northern Telecom, said he believed successful companies would be those implementing self-directed work teams in their organizations. Within his company, Boggan felt much better knowing that 420 people were worried about the business, instead of only 15 senior managers. He said empowering the employee is the formula for team success.

Schilder stated that Harvey Kolodny, professor at the University of Toronto, found results of self-directed work teams for new facilities are 30 to 50 percent better than existing traditional management structures.

Many changes must take place between employee and supervision before self-directed work teams are implemented. Schilder stated that first line managers, for example, usually have a fear of losing their position or jobs. Statistics showed that 25 percent of Northern Telecom first-line managers left the company after team implementation. This was caused by the lack of training for first-line managers in their new roles as facilitator or guide to the team. Schilder stressed that the key to implementing self-directed work teams is training, job skills, business knowledge, problem solving, and team dynamics. Training eases the transition period from traditional management to self-directed management.

N. A. Hitchcock, writing in *Modern Materials Handling* (1993), reviewed self-managed work teams to see if they would boost a company's bottom line. The article stressed that self-directed work teams were not for everyone but, where successful, they improve quality, cost, scheduling, and decision making. However, if traditional or existing managers did not give up their command and control, the team would fail.

Faced with changing economic times, managers at Pitney Bowes, Stamford, Connecticut, were forced to look at an alternative management style. They questioned whether self-managed teams could boost their bottom line. When Pitney Bowes transformed the decision-making power and responsibility for completing products to self-directed work teams, inventories were reduced 60 percent and cycle time improved in one area 94 percent.

Before transformation could be made, managers saw a need for training in problem-solving, conflict resolution, team communication, and technical skills. As the teams developed, direct supervision began to disappear, and the teams were successful. Other companies showed their success with self-directed work teams by an increase in sales and a decrease in materials and operating costs. The keys to a successful self-managed team at Pitney Bowes were training, a transition plan, management providing a facilitator to coach the team, and management allowing team members to use their skills.

### 1.2.7 Summary of Literature Review

Throughout the review, self-directed work teams were favored by organizations. Correct team building techniques are vital to the success of self-directed work teams. Included in team building are training and good communications between management and the work team members. Failure will result if team building is approached without extensive planning. No conflicts existed with the concept of self-directed work teams. The ideology was consistent throughout the review and supported the concept that self-directed work teams are effective tools in today's organization.

## 1.3 STATEMENT OF PROBLEM

The purpose of this research is to show the success and the effectiveness of self-directed work teams in today's organization. The literature review demonstrates how a successful work team should be built. The following questions can determine a self-directed work team's effectiveness and success:

1. Is the team's mission clearly defined to each team member?
2. Are the goals clearly defined and achievable by all team members?
3. Is empowerment (decision-making power) equally distributed among all team members?
4. Is open and honest communication allowed among team members?
5. Is each team member respected and valued for his/her position on the team?
6. Is the team effectively rewarded for its accomplishments?
7. Have team members received adequate training to effectively complete their job tasks?

## 1.4 DEFINITION OF TERMS

*Communication* - the exchange or transmission of ideas, messages, and information.

*Compensation* - a form of reward for successfully accomplishing a goal.

*Decision-making process* - gathering information, evaluating possible courses of action, selecting a course of action, and reviewing that action.

*Facilitator* - a person who helps direct the team but is not a member of the team, usually the ex-supervisor.

*Pay-for-knowledge Plan* - A developmental pay system in which extra compensation is given to employees with newly acquired skills that actually benefit the team and organizational performance.

*Interpersonal conflicts* - problems hard to solve between members of the team.

*Management support* - aid given to empowered employees on self-directed work teams after the transition period.

*Method* - a system for accomplishing a goal.

*Organization* - groups or a number of people working toward a particular goal.

*Planning* - a process for attaining operational and, thus, strategic goals; involves the development of programs, policies, and procedures for achieving goals.

*Progressive transition* - moving forward at a continuous rate, phasing into the process over a period of time (usually 2 to 4 years).

*Quality* - meeting or exceeding the goal expected by a customer.

*Self-directed work team* - also known as socio-technical theory or autonomous group of employees (typically 5 to 10) that determines work assignments, schedules, processes, quality control, and reward systems.

*Team leader* - person acting as leader of a team on a rotation basis.

*Traditional compensation* - the standard personal review and reward system of an individual employee.

*Traditional management* - standard supervision employer/employee relationship without employee empowerment.

## 1.5 ASSUMPTIONS

I assume that the four self-directed work teams will answer the survey questions accurately and honestly. I also assume that the teams will reflect most self-directed work teams' ideas and feelings. Answers to the survey questions will provide the data needed to proceed with this study. I assume that the surveys will be returned in a timely manner and that data will be summarized correctly. The survey should show the degree of effectiveness and success of self-directed work

teams. I assume the organization will be greatly benefited as a result of the self-directed work teams' effectiveness and success.

## 1.6 SCOPE AND LIMITATIONS OF STUDY

The scope of this study includes established and newly implemented self-directed work teams. Feedback from four self-directed work teams is examined to determine how they feel about empowerment and self-direction and their effects. Do the added responsibilities increase employee self-esteem and self-worth? Success and effectiveness of self-directed work teams and their benefits to the organization are evaluated. Two limitations are lack of time and lack of sufficient numbers of established self-directed work teams. The organization surveyed contains several new self-directed work teams. As a result, four self-directed work teams were questioned, two established teams and two new teams.

## 1.7 SIGNIFICANCE OF STUDY

Because of the changing economic times, organizations today are flattening their structures by implementing self-directed work teams. Organizations want to continue to produce high-quality work but with fewer employees.

This study is being done to assist organizations in their transition from traditional management to self-directed work teams by demonstrating how successful work teams are formed. It shows that self-direction and empowerment are effective tools and that the employee and the organization benefit from self-directed work teams.

## 2. METHODS

In the current economic times, organizations are trying to flatten their organizational charts, decrease personnel, and increase productivity. Some organizations have decided to implement self-directed work teams to help achieve these goals. This study is being conducted to determine if self-directed work teams are effective, successful tools for the organization.

Data was collected by giving a cover letter (Appendix A) and a questionnaire (Appendix B) to four self-directed work teams in the Martin Marietta Energy Systems, Inc. (Energy Systems) organization. Two Energy Systems teams are established and two are newly formed. It was believed that the Energy Systems organization would provide good cooperation in the return of surveys because of its familiarity with the researcher. The new concept of self-directed work teams and the absence of a sufficient number of established teams, limited the researcher to four teams. Section 2 contains: (a) research design, (b) sample

selection, (c) questionnaire development, (d) data collection procedure, and (e) data analysis.

## **2.1 RESEARCH DESIGN**

A survey questionnaire was given to each team member to determine the team's effectiveness. The researcher chose two established self-directed work teams and two newly implemented self-directed work teams. These teams were chosen to examine whether the level of experience aided in the effectiveness of the work teams. The survey questionnaire was selected as the method of research, instead of interviewing, because of time constraints on the research.

## **2.2 SAMPLE SELECTION**

The researcher used four self-directed work teams within the Energy Systems organization. The organization established these self-directed work teams as a pilot program. Results would be analyzed before implementing other self-directed work teams within the organization. The research was conducted using 20 employees from the four teams. A comparison was done to measure the differences in the level of effectiveness among the individual teams and between the two groups of teams.

Permission to distribute the questionnaire was obtained from each affected department manager. Because of the limited time and limited number of self-directed work teams, the questionnaire, along with a cover letter, was hand-delivered to each team member on two established work teams and two newly implemented work teams.

## **2.3 QUESTIONNAIRE DEVELOPMENT**

Questions were based on information obtained during the literature review discussed in Section 1. Seven investigative topics were adapted from the literature to determine the 25 survey questions. The questionnaire contained: (a) two questions concerning team mission, (b) five questions concerning goals, (c) three questions concerning empowerment, (d) five questions concerning communication, (e) four questions concerning team member respect, (f) three questions concerning training, and (g) three questions concerning team compensation. The researcher used the five-point Likert scale for the questionnaire to obtain the closest accurate response from each team member. The questionnaire was checked for face validity by colleagues and study group members. Suggestions were given for deletions and additions. Due to limited time, reliability was unobtainable. The questionnaire was developed with the help of articles by Hoeuemeyer, Hamilton, and Johnson who have done previous team building and



team effectiveness research. Some of the questions they used were adapted to this questionnaire.

## 2.4 PROCEDURE

The survey questionnaire was hand delivered to each member of each team. Team members were contacted first to obtain their agreement to participate in the study. A time was arranged for the survey to be taken. Each team member was given a questionnaire, which included a cover letter that explained in detail the research and served as informed consent. Names of employees were not requested. All employees remained anonymous.

The researcher planned to receive the surveys back at the time the surveys were given. The surveys were handed out March 30, 1994, through April 2, 1994. The survey was designed to require about 10 minutes of a team member's time.

## 2.5 DATA ANALYSIS

The researcher used the five-point Likert scale to analyze data. Strongly disagree received a response value of one and strongly agree received a response value of five. Totals from each team were added together to illustrate team effectiveness. It was felt that the length of time a team has existed was important in analyzing team effectiveness. To examine differences among the four teams, frequency distribution was used to collect data.

The questionnaire consisted of 25 questions that dealt with the seven investigative topics listed in Section 2.3. Investigative question 1 concerning team mission was answered by survey questions 1 and 12. Investigative question 2 concerning goals was answered by survey questions 2, 7, 8, 17, and 18. Investigative question 3 concerning team empowerment was answered by survey questions 4, 9, and 14. Investigative question 4 concerning good communication was answered by survey questions 3, 10, 15, 19, and 21. Investigative question 5 concerning team member respect was answered by survey questions 11, 13, 20, and 25. Investigative question 6 concerning team compensation was answered by survey questions 22 through 24. Investigative question 7 concerning team training was answered by survey questions 5, 6, and 16.

## 3. RESULTS

This section reports the results of a survey given to four self-directed work teams within the Energy Systems organization. The survey responses were used to determine the effectiveness of each team and how the maturity of the team influenced this effectiveness.

In the following section, the descriptive results are arranged in the order of the investigative topics listed in Section 2.3. Each investigative question was evaluated for similarities to the survey. Graphs and tables are shown with each investigative question to emphasize the statistical results. Section 3 ends with a summary of the results.

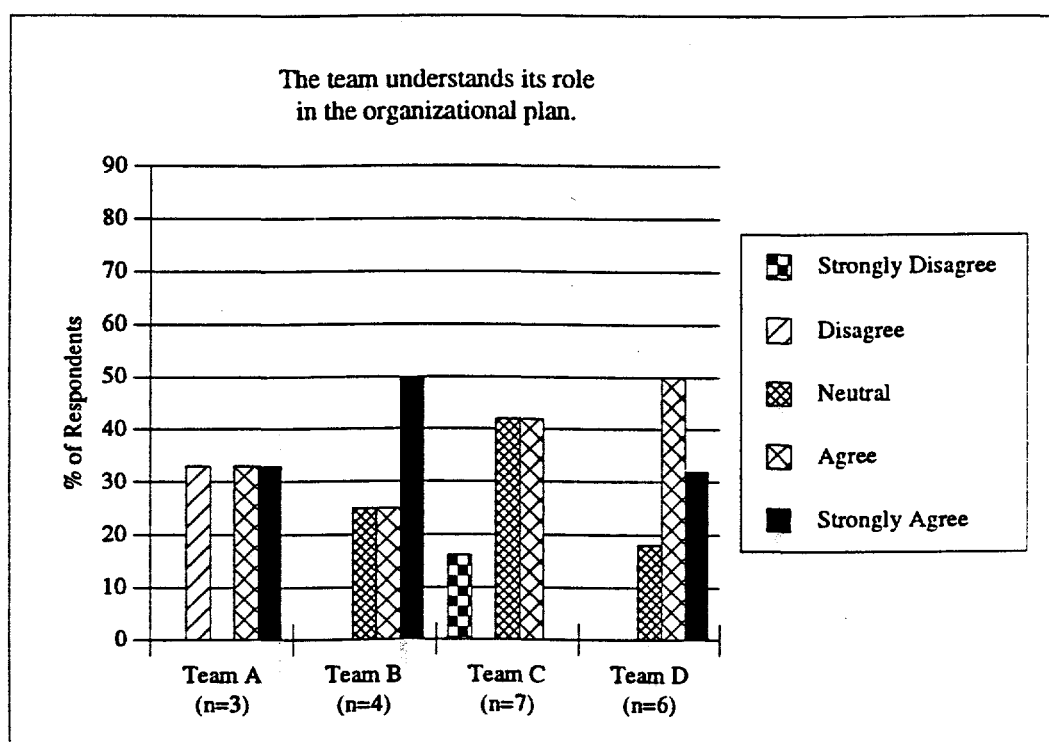
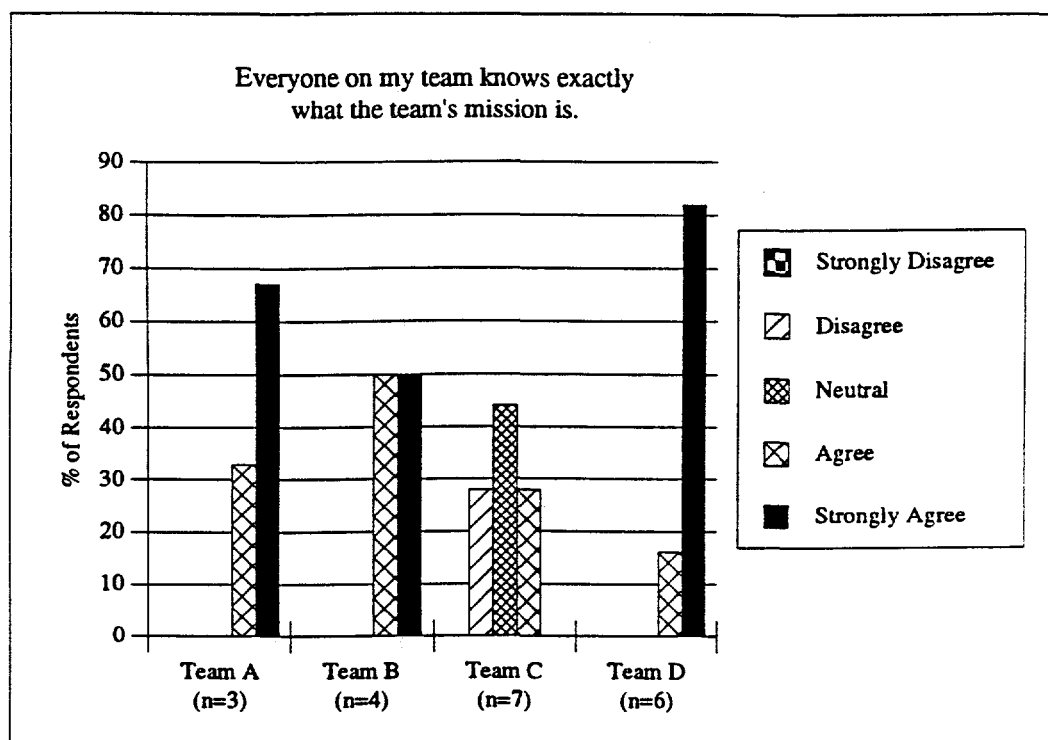
### 3.1 DESCRIPTIVE RESULTS

Twenty Energy Systems employees in four self-directed work teams (A, B, C, and D) within the Energy Systems organization were surveyed. Twenty questionnaires were given out and 20 questionnaires were returned for a 100 percent response rate. Teams A and B are newly implemented teams (1 month) and teams C and D are established teams (1 year). The data were analyzed to identify if a difference in effectiveness existed between Teams A and B (new teams) and Teams C and D (established teams).

The questionnaire contained 25 questions in an attempt to determine the effectiveness of each team. Seven criteria were used to measure team effectiveness: (a) team mission, (b) goals, (c) empowerment, (d) communication, (e) team member respect, (f) training, and (g) compensation/rewards. Each question asked the respondents to rate their response on a five-point Likert scale that included: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

### 3.2 RESULTS FOR CRITERION 1: TEAM MISSION

The purpose of this question was to determine if the team mission was defined clearly to each team member (see Fig. 1). Team A expressed a 66.7 percent strongly agree response to knowing the team mission. Team B had a 50 percent strongly agree and 50 percent agree response. Team C had a 42.9 percent neutral response, 28 percent agree and a 28 percent disagree. Team D had a 83.3 percent strongly agree. Team A members said they understood what their role is in the organizational plan and responded with a 33.3 percent disagree, agree, and strongly agree response. Team B indicated a 50 percent strongly agree. Team C displayed a 42.9 percent agree response and a 42.9 percent neutral response. Team D expressed a 33.3 percent strongly agree and a 50 percent agree response.



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**Fig. 1. Criterion 1: Is the team's mission clearly defined to each team member?**

### 3.3 RESULTS FOR CRITERION 2: GOALS

Goal setting and the achievement of goals are areas the researcher felt were important for self-directed work teams to address. If goals are clearly defined and achievable by team members, the team will be more effective. According to the research results (see Table 1), when asked if the team leader consistently lets team members know if they are meeting their customers' needs, 66.7 percent of Team A gave a neutral response and 33.3 percent gave a disagree response. Team B does not have an appointed team leader. Team C had a 71 percent neutral response. Team D had a 50 percent strongly agree and a 50 percent agree response rate.

When asked if everyone on the team knows and understands the team's mission (Table 1) 100 percent of Team A gave an agree response. Team B had a 75 percent strongly agree response. Team C had a 42 percent agree response, and Team D had a 66.7 percent strongly agree response.

Team A had a 100 percent agree response for the team working together to set goals (Table 1), while Team B had a 50 percent agree response. Team C had a 28 percent agree response. Team D had a 50 percent strongly agree response.

Everyone on the team working toward accomplishing the common goal (Table 1) received a 66.7 percent agree response from Team A. Team B had a 75 percent strongly agree response. Team C had a 28.6 percent agree response. Team D had a 50 percent strongly agree response.

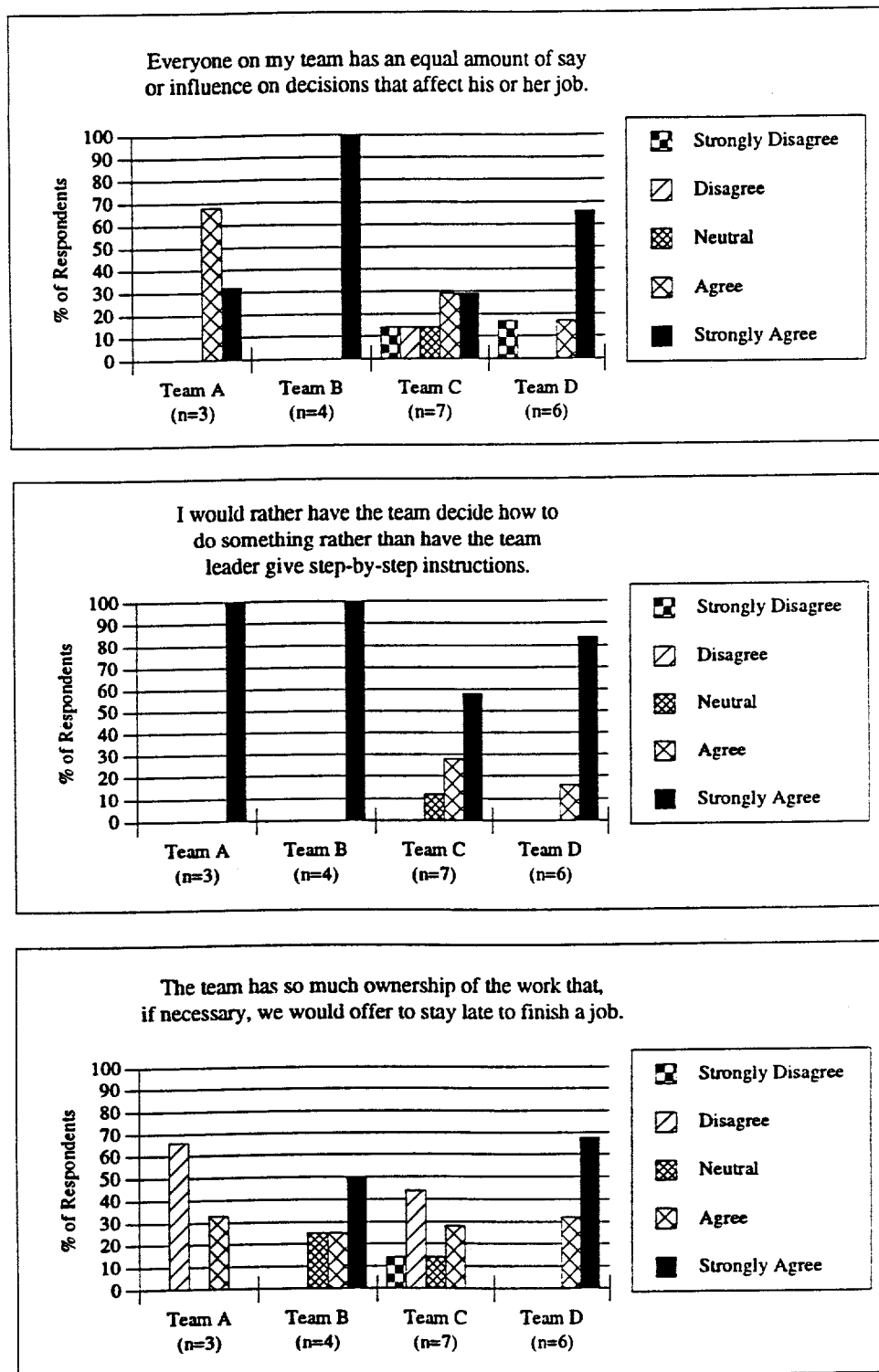
On the team having the support it needs to meet the customer's needs (Table 1), Team A scored an even 33.3 percent disagree, neutral and agree response rate. Team B had a 75 percent strongly agree. Team C indicated a 57.1 percent disagree response, while Team D had a 33.3 percent strongly agree and 33.3 percent disagree response.

### 3.4 RESULTS FOR CRITERION 3: EMPOWERMENT

The literature review indicated that empowerment is essential to the success of self-directed work teams. For a team to be successful, each member must be given equal decision-making power. Results for the questions that pertained to empowerment given equally to all team members are shown in Fig. 2. The figure illustrates that Team B (no team leader) had an 83 percent strongly agree response. Team A had a 44.4 percent strongly agree over all response for the three questions. Team C averaged a 28.6 percent agree response. Team D had a 72.3 percent strongly agree response for the three questions.

Table 1. Criterion 2: Are the goals clearly defined and achievable by all team members?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
2. The team leader consistently lets the team members know the degree to which the team is meeting the customers' needs						
Team A Frequency	0	1	2	0	0	3
Percentage	0.0%	33.3%	66.7%	0.0%	0.0%	100.0%
Team B Frequency	0	0	4	0	0	4
Percentage	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Team C Frequency	1	1	5	0	0	7
Percentage	14.3%	14.3%	71.4%	0.0%	0.0%	100.0%
Team D Frequency	0	0	0	3	3	6
Percentage	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
7. Everyone on the team knows and understands the team's priorities						
Team A Frequency	0	0	0	3	0	3
Percentage	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Team B Frequency	0	0	0	1	3	4
Percentage	0.0%	0.0%	0.0%	25.0%	75.0%	100.0%
Team C Frequency	1	0	3	3	0	7
Percentage	14.3%	0.0%	42.9%	42.9%	0.0%	100.0%
Team D Frequency	0	0	0	2	4	6
Percentage	0.0%	0.0%	0.0%	33.3%	66.7%	100.0%
8. As a team, we work together to set clear, achievable, and appropriate goals.						
Team A Frequency	0	0	0	3	0	3
Percentage	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Team B Frequency	0	0	1	2	1	4
Percentage	0.0%	0.0%	25.0%	50.0%	25.0%	100.0%
Team C Frequency	1	3	1	2	0	7
Percentage	14.3%	42.9%	14.3%	28.6%	0.0%	100.0%
Team D Frequency	0	0	1	2	3	6
Percentage	0.0%	0.0%	16.7%	33.3%	50.0%	100.0%
17. Everyone on the team is working toward accomplishing the common goals.						
Team A Frequency	0	0	0	2	1	3
Percentage	0.0%	0.0%	0.0%	66.7%	33.3%	100.0%
Team B Frequency	0	0	0	1	3	4
Percentage	0.0%	0.0%	0.0%	25.0%	75.0%	100.0%
Team C Frequency	1	3	1	2	0	7
Percentage	14.3%	42.9%	14.3%	28.6%	0.0%	100.0%
Team D Frequency	0	0	1	2	3	6
Percentage	0.0%	0.0%	16.7%	33.3%	50.0%	100.0%
18. The team has the support and resources it needs to meet the customer's needs.						
Team A Frequency	0	1	1	1	0	3
Percentage	0.0%	33.3%	33.3%	33.3%	0.0%	100.0%
Team B Frequency	0	0	0	1	3	4
Percentage	0.0%	0.0%	0.0%	25.0%	75.0%	100.0%
Team C Frequency	2	4	1	0	0	7
Percentage	28.6%	57.1%	14.3%	0.0%	0.0%	100.0%
Team D Frequency	0	2	1	1	2	6
Percentage	0.0%	33.3%	16.7%	16.7%	33.3%	100.0%



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Fig. 2. Criterion 3: Will empowerment (decision-making power) be given equally to all team members?

### 3.5 RESULTS FOR CRITERION 4: COMMUNICATIONS

One of the most important skills a self-directed work team must have to be effective is good communications. Table 2 depicts results for the questions that pertain to communications. Team C gave a more positive response to open and honest communications with a 100 percent agree response. Team B and Team D displayed a 50 percent agree response, while team A had a 66.7 percent agree response rate. "As a team we are able to work together to solve problems" received 100 percent agree response from Team A, while Team B had a 50 percent strongly agree. Team C had a 42.9 percent agree response, while Team D had a 50 percent strongly agree response.

Questions 15 and 19 (Table 2) addressed the team leaders communications skills with the team. Team A had a 33.3 percent strongly agree response. Team B does not have an appointed team leader. Team C had a 35.7 percent agree response, while Team D had a 50 percent strongly agree response for the two questions. Sixty-six percent of Team A and 50 percent of Team B agree that team members clearly understand the team's unwritten rules on behavior. Fifty-seven percent of Team C and 50 percent of Team D agree to understanding the team's unwritten rules.

### 3.6 RESULTS FOR CRITERION 5: RESPECT

Criterion 5 asked whether each team member's position was respected and valued. Table 3 displays the results for the questions concerning team member respect. As the table indicates, Team D gave a more positive response (62.5 percent strongly agree) to the questions than Teams A, B, and C. Team A had a 50 percent agree, Team B had a 25 percent agree, and Team C had a 42.8 percent agree response to the questions.

### 3.7 RESULTS FOR CRITERION 6: TRAINING

According to the research reported in Sect. 1, the researcher believes that training is one of the most vital steps in team success. Figure 3 indicates that more than 50 percent of the responses for all three questions grouped under criterion 6 were answered either agree or strongly agree that team members received adequate training to effectively complete their job tasks.

### 3.8 RESULTS FOR CRITERION 7: COMPENSATION/REWARDS

It was established in the literature review (Sect. 1) that some type of reward system needs to be in place for self-directed work teams. The traditional reward system has been ineffective. Each team member was asked if the current reward

Table 2. Criterion 4: Will open and honest communications be allowed among team members?

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
3. If outsiders were to describe the way we communicate within our team, they would use such words as "open," honest, "timely, and "two-way."						
Team A Frequency	0	1	0	2	0	3
Percentage	0.0%	33.3%	0.0%	66.7%	0.0%	100.0%
Team B Frequency	0	0	1	2	1	4
Percentage	0.0%	0.0%	25.0%	50.0%	25.0%	100.0%
Team C Frequency	0	0	0	7	0	7
Percentage	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Team D Frequency	0	1	0	3	2	6
Percentage	0.0%	16.7%	0.0%	50.0%	33.3%	100.0%
10. As a team, we are able to work together to solve conflicts rather than ignoring them.						
Team A Frequency	0	0	0	3	0	3
Percentage	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Team B Frequency	0	0	0	2	2	4
Percentage	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
Team C Frequency	1	1	1	3	1	7
Percentage	14.3%	14.3%	14.3%	42.9%	14.3%	100.0%
Team D Frequency	0	1	1	1	3	6
Percentage	0.0%	16.7%	16.7%	16.7%	50.0%	100.0%
16. The team leader encourages every person on the team to be open and honest, even if people have to share information that goes against what the team leader would like to hear.						
Team A Frequency	0	1	1	0	1	3
Percentage	0.0%	33.3%	33.3%	0.0%	33.3%	100.0%
Team B Frequency	0	0	3	1	0	4
Percentage	0.0%	0.0%	75.0%	25.0%	0.0%	100.0%
Team C Frequency	0	1	2	4	0	7
Percentage	0.0%	14.3%	28.6%	57.1%	0.0%	100.0%
Team D Frequency	1	0	0	1	4	6
Percentage	16.7%	0.0%	0.0%	16.7%	66.7%	100.0%
19. The team knows as much about what's going on in the organization as the team leader does, because the team leader always keeps everyone informed.						
Team A Frequency	0	1	1	0	1	3
Percentage	0.0%	33.3%	33.3%	0.0%	33.3%	100.0%
Team B Frequency	0	0	3	0	1	4
Percentage	0.0%	0.0%	75.0%	0.0%	25.0%	100.0%
Team C Frequency	1	3	2	1	0	7
Percentage	14.3%	42.9%	28.6%	14.3%	0.0%	100.0%
Team D Frequency	1	0	0	3	2	6
Percentage	16.7%	0.0%	0.0%	50.0%	33.3%	100.0%
21. Team members clearly understood the team's unwritten rules on behavior within the group.						
Team A Frequency	0	1	0	2	0	3
Percentage	0.0%	33.3%	0.0%	66.7%	0.0%	100.0%
Team B Frequency	0	0	1	2	1	4
Percentage	0.0%	0.0%	25.0%	50.0%	25.0%	100.0%
Team C Frequency	0	3	0	4	0	7
Percentage	0.0%	42.9%	0.0%	57.1%	0.0%	100.0%
Team D Frequency	0	1	1	3	1	6
Percentage	0.0%	16.7%	16.7%	50.0%	16.7%	100.0%



**Table 3. Criterion 5: Will each team member be respected and valued for his/her position on the team?**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
<b>11. The role of each team member is understood by the whole team.</b>						
Team A Frequency	0	0	0	3	0	3
Percentage	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Team B Frequency	0	0	0	2	2	4
Percentage	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
Team C Frequency	1	2	2	2	0	7
Percentage	14.3%	28.6%	28.6%	28.6%	0.0%	100.0%
Team D Frequency	0	0	0	2	4	6
Percentage	0.0%	0.0%	0.0%	33.3%	66.7%	100.0%
<b>13. If my team doesn't reach a goal, I'm more interested in finding out why we have failed to meet the goal than I am in blaming a team member.</b>						
Team A Frequency	0	1	1	0	1	3
Percentage	0.0%	33.3%	33.3%	0.0%	33.3%	100.0%
Team B Frequency	0	0	0	2	2	4
Percentage	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
Team C Frequency	0	0	0	4	3	7
Percentage	0.0%	0.0%	0.0%	57.1%	42.9%	100.0%
Team D Frequency	0	0	0	1	5	6
Percentage	0.0%	0.0%	0.0%	16.7%	83.3%	100.0%
<b>20. The team leader believes that everyone on the team has something to contribute, such as knowledge, skills, abilities, and information.</b>						
Team A Frequency	0	0	0	2	1	3
Percentage	0.0%	0.0%	0.0%	66.7%	33.3%	100.0%
Team B Frequency	0	0	4	0	0	4
Percentage	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Team C Frequency	1	0	2	3	1	7
Percentage	14.3%	0.0%	28.6%	42.9%	14.3%	100.0%
Team D Frequency	0	0	1	0	5	6
Percentage	0.0%	0.0%	16.7%	0.0%	83.3%	100.0%
<b>25. Members of the team are viewed with more respect by their peers because they are self-directed?</b>						
Team A Frequency	0	1	1	1	0	3
Percentage	0.0%	33.3%	33.3%	33.3%	0.0%	100.0%
Team B Frequency	0	1	3	0	0	4
Percentage	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
Team C Frequency	2	0	2	3	0	7
Percentage	28.6%	0.0%	28.6%	42.9%	0.0%	100.0%
Team D Frequency	1	0	4	0	1	6
Percentage	16.7%	0.0%	66.7%	0.0%	16.7%	100.0%

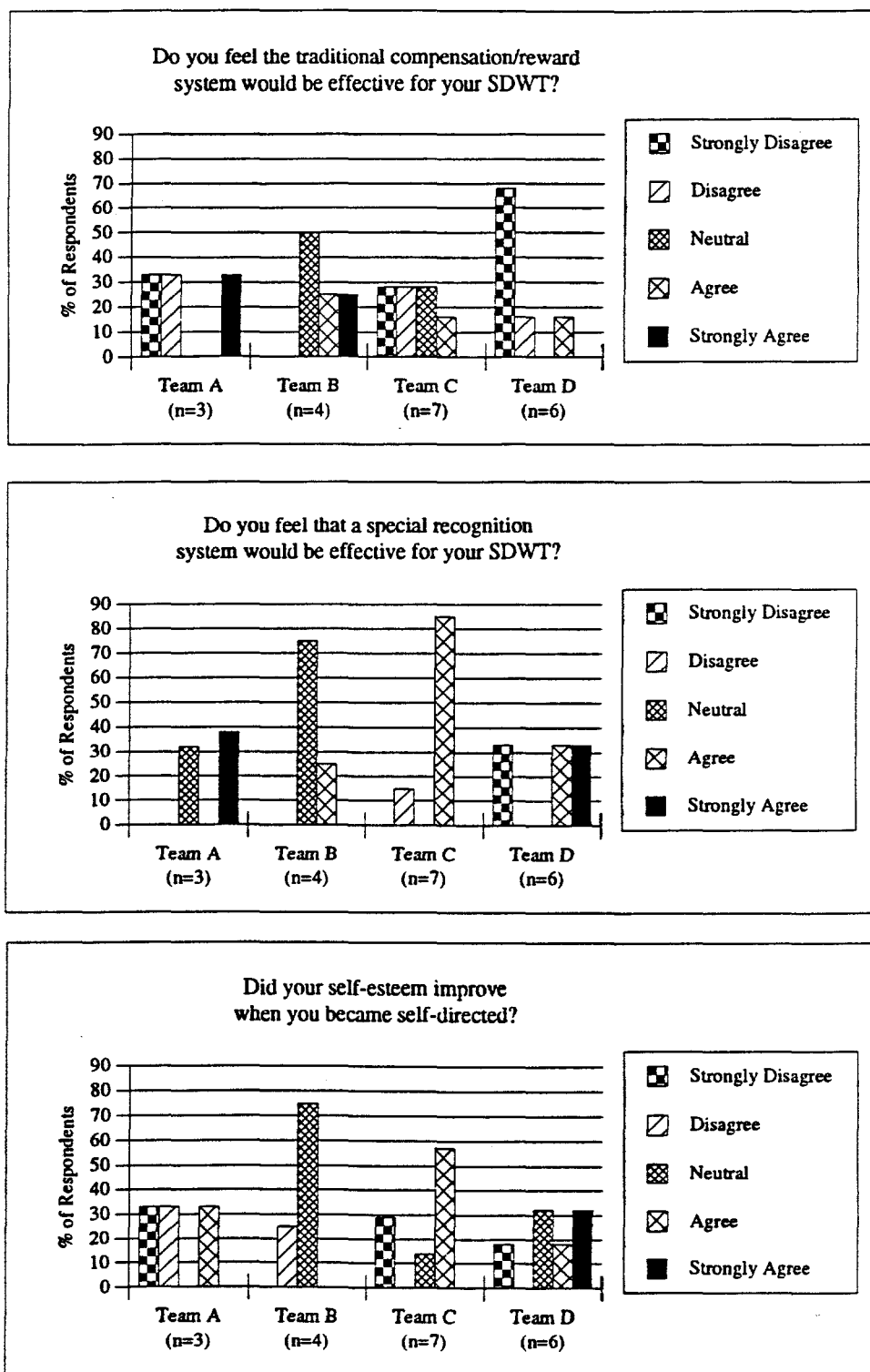


Fig. 3. Criterion 6: Have the team members received adequate training to complete their job tasks effectively?

system was effective. Figure 4 displays the results for the questions that concern rewards for accomplishments. Team A had a 33.3 percent strongly disagree and 33.3 percent disagree response to the traditional compensation reward system for teams. Team B had a 50 percent neutral response. Team C had a 28.6 percent strongly disagree. Team D had a 66.7 percent strongly disagree.

Need for a special recognition system received a 66.7 percent strongly agree from Team A. Team B had a 75 percent neutral response. Team C had a 85.7 percent agree response. Team D had a 33.3 percent strongly agree and agree response.

Team A displayed a 33.3 percent strongly disagree, and disagree response to improved self-esteem by becoming self-directed. Team B had a 75 percent neutral response. Team C had a 57.1 percent agree response. Team D had a 33.3 percent strongly agree response.

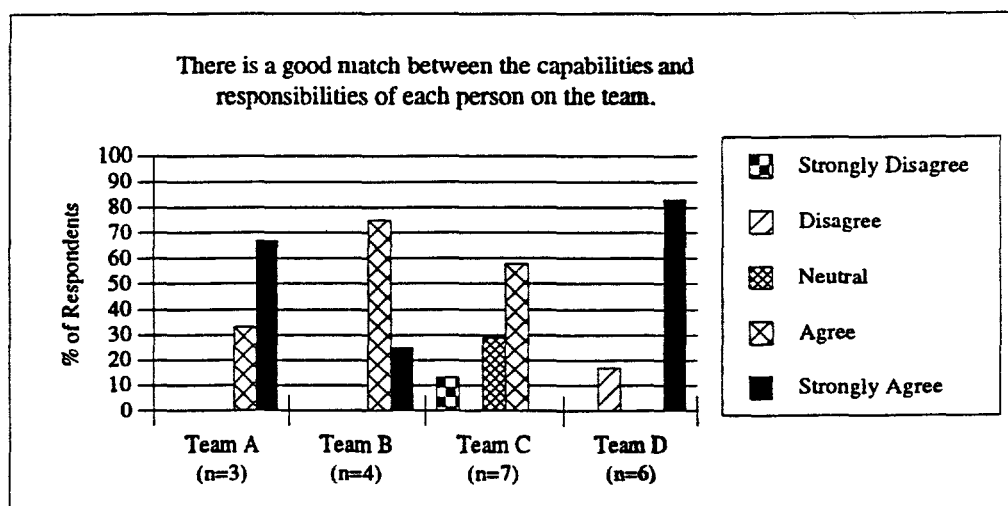
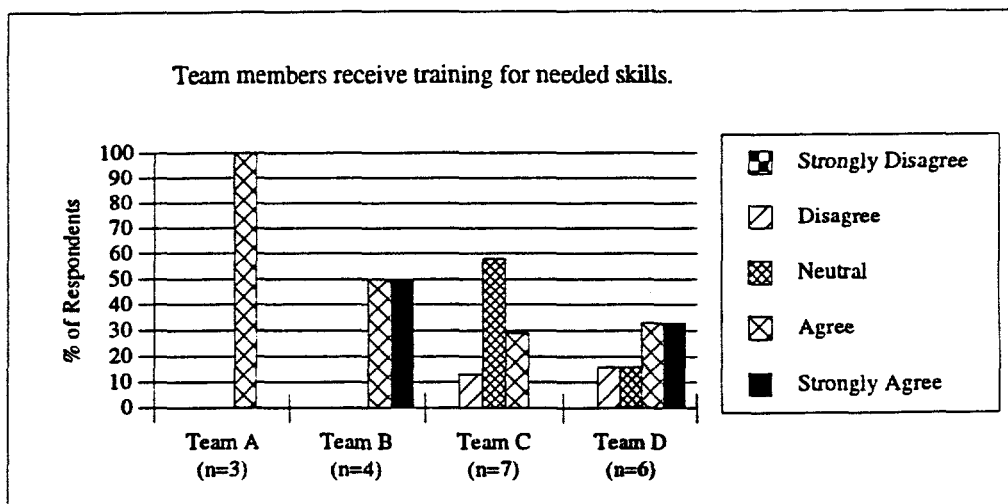
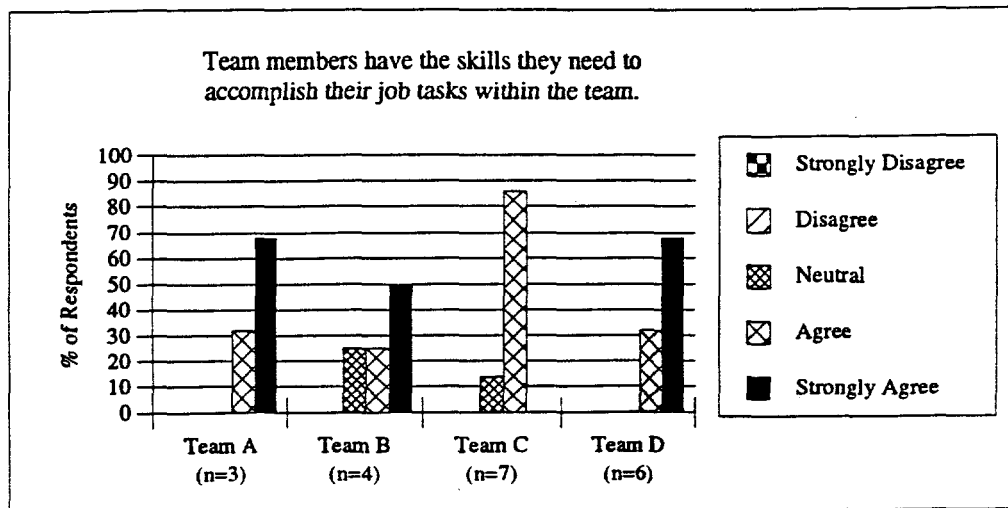
### 3.9 SUMMARY OF RESULTS

This researcher received several comments from participants. All teams expressed frustration about not being recognized by the organization as a self-directed work team while being strongly encouraged to become self-directed. One member of Team A expressed that problems were sometimes ignored rather than the team coming together to solve them. Another member of Team A stated that the team could not have true ownership because of company rules. Team A also expressed that communications is sometimes a problem.

Every team member on Team B said the majority rules for decision-making. Two members said all goals and problems were discussed within the team and then voted on. They did not want to fall back into the traditional management system by appointing a team leader. They have seen other teams use team leaders and fall back into traditional management. They wanted to empower each team member equally.

Team C members all stated that they were not really self-directed. The team leader was appointed by management and the team leader position is not rotated among team members. The team felt that equal empowerment was not given to each team member. The researcher felt the team was unhappy with the management style. One member said that training was needed.

The team leader for Team D was also appointed by management and some team members felt unhappy about the management style. One team member explained that the team leader was seen by the company as a supervisor but was seen by the team members as a team leader. The researcher felt that is why the team showed success. Another team member stated that the team leader gave each team member equal empowerment.



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Fig. 4. Criterion 7: Are self-directed work teams effectively rewarded for accomplishments?

## 4. DISCUSSION

The research survey was given to four self-directed work teams to determine levels of team effectiveness. Five of the seven criteria addressed in the statement of problem (Sect. 1.3) had to be successfully answered for the team to be considered effective. Section 4 discusses the researcher's opinion on the effectiveness of each self-directed work team. The researcher will refer back to the Literature Review (Sect. 1.2) to support the research findings.

This section will also display, in the order of the criteria examined, a summary of the major findings from the research questionnaire. A comparative study will be conducted on each self-directed work team. A conclusion will be drawn by the researcher, and recommendations will be given.

### 4.1 SUMMARY OF MAJOR FINDINGS

According to Hoeuemeyer (1993), a team is considered effective when it scores a high frequency response in the areas of team mission, goal setting, empowerment, communications, and peer respect. The researcher added training and compensation/rewards as a result of other studies reviewed. These seven criteria were considered by all team members.

According to Douglass (1992), team members should understand their team's mission and goals. The team should be involved in the planning process, which will help each member obtain a clear picture of missions and goals. Of the two questions concerning team mission (Fig. 1), Team C (established team) rated the lowest response (35.7 percent agree) out of the four teams on clearly defined team missions. Teams A, B, and D scored a 50 percent agree and strongly agree response to the two questions (Fig. 1) on clearly defined goals.

The literature review showed that complete empowerment must be given to a team for the team to be effective. All four teams expressed that they have limited ownership of their team. Teams C and D are established teams, and their team leaders were appointed by management. This researcher felt that Team D's team leader knew how to empower the team because of the team's noted effectiveness (Fig. 2). The leader was regarded as a supervisor by the organization and as a team leader by the team. The team leader displayed training in leadership and empowerment. Training was proven to pay off for Team D's effectiveness.

Team C rated the lowest of the four self-directed work teams, with a 38.5 percent strongly agree response (Fig. 2). Members stated they did not feel like a self-directed work team because the team leader was appointed and the position is not rotated. Equal empowerment had not been given to each team member. This researcher believes that is why the team showed dissatisfaction. One team member suggested training as a resolution. This researcher was aware of the tension and stress from the team's frustration.

Team B did not want to be like Team C, so it chose not to use a team leader approach. Instead, it empowered each member of the team equally. Team B (new team) ranked the highest with an 83 percent strongly agree response (Fig. 2). Team A chose to use a team leader style of management. The members of Team A rotate the leader position so that everyone is empowered. Team A rated a 50 percent agree response (Fig. 2).

Good communications was another important skill a team must maintain. Without communications, the team cannot function effectively through problem-solving, goal setting, and planning.

Criterion 4 rated each team concerning open and honest communications.

All teams expressed a rating of 50 percent agree or strongly agree on open and honest communications. This researcher believes the response rate resulted from the organization providing the employees with communications skills training. However, this researcher believes that communications could be better for Team A because of its 33.3 percent disagree response (Table 2) on open and honest communications and understanding. Recommendations will be given later in this section.

According to Hamilton (1993), training was vital to a successful self-directed work team. Training in communications, leadership, decision-making, problem solving, and technical skills was a must. Teams A, B, and D felt that they have received adequate training to complete their job tasks (Fig. 3). Team C's team leader expressed a need for more training.

Compensation was viewed as an important part of a team's design. Compensation gives the team an incentive to reach desired goals. The literature review showed that each team member should play a role in developing the reward system. If the organization designs the system and issues the reward without consulting the team, ownership and empowerment will be lost. All team participants agreed that a new reward system needs to be implemented with a 50 percent agree or strongly agree response (Fig. 4). This researcher believes that a reward would increase team performance and self-esteem.

## 4.2 CONCLUSION

This study revealed that full empowerment and self-direction were lacking among the four teams. The self-directed work teams were not completely recognized by the organization. When the organization appoints team leaders, the team starts out on a bad note. Correct team building is important to the team's success. Without full empowerment, Team C was not as effective as the other teams. The new teams (A and B) started the right way by choosing their own style of management.

The literature review revealed that when true ownership was displayed, the team was effective. For example, Team B decided not to appoint a team leader for fear of becoming like traditional management. By not having a team leader, each team member was empowered equally and, thus, the team demonstrated a good success rate. Team D has an appointed team leader skilled in empowering the team. By the team feeling empowered, they, too, showed a good success rate.

Communications also plays a big part in team empowerment and team success. Team A displayed a communication deficiency between the team leader and team members (Table 2). If not corrected, this deficiency could cause it to be less effective. However, Team B members stated that they discuss everything and the majority rules. This researcher did not find any evident correlation between established teams and newly implemented teams. Each team had its own distinctive characteristics and responded accordingly.

It is important to remember the seven aspects of building an effective team. In team building, teams must agree on a mission, define goals, achieve empowerment, have good communications, show team member respect, be effectively trained, and have compensation/rewards incentives. According to Hoeuemeyer, a team would be considered effective when it consistently scores a high frequency in five or more of the above listed criteria. Team D, an established team, consistently scored higher in six of the seven criteria of team building and was considered an effective team. Team C, an established team, responded successfully in only four criteria of team building. That makes Team C marginally effective. Teams A and B, newly implemented, scored a high frequency in five criteria and were considered to be effective teams.

#### 4.3 RECOMMENDATIONS

To best achieve effective self-directed work teams for the Energy Systems organization, this researcher recommends the following strategies:

1. Implement team training.
2. Ensure full team empowerment and organizational support.
3. Implement a training program for new teams or teams in trouble of failing. Emphasize team leader training and training for the ex-supervisor, as a facilitator, until the team can function on its own.
4. Implement a method to evaluate team effectiveness.
5. Implement a compensation/reward system designed for self-directed work teams.

When the organization displays commitment in aiding self-directed work teams to meet their goals, the team will, in turn, be committed, and morale will improve among team members. Without commitment from both the organization and team members, self-directed work teams will not be effective.

This researcher believes the organization must act quickly in implementing these recommendations. With time and effort, self-directed work teams will be effective tools for the organization.



**Appendix A**  
**DIRECTION SHEET**

March 30, 1994

Energy Systems Employees:

I am currently working on my B. S. Degree in Organizational Management. I am required to do a research paper in order to be eligible for graduation. My topic is "What Makes Self-Directed Work Teams Successful and Effective Tools For Today's Organization?" I want to determine the level of effectiveness of self-directed work teams in the work place.

I would like your help in gathering information on this subject. I would appreciate it if you would complete the attached questionnaire and return it to me promptly. You may drop it in my mail box (in Rose's office) or give it to me directly, my building number is 9711-1, RM-34, and phone number 574-5017. It will take approximately 10 minutes of your time to complete the questionnaire. Your response will be kept strictly confidential and upon completion of this survey it will show informed consent. Please feel free to include any additional comments that will aid in my research.

Thank you for your cooperation. If you are interested, I will be glad to share the results of the questionnaire with you.

Sincerely,

Angela D. Arnwine

## Appendix B

### SURVEY

At the completion of this questionnaire, return it to me (Angela Arnwine) immediately. After the statistical analysis is complete, all questionnaires will be destroyed. There is no need for you to put your name on this survey. Your responses will be kept strictly confidential and upon the completion of this survey informed consent will be shown. If you are interested in the results of this survey call me at 4-5017 and I will mail you a copy. If there are additional comments you would like to add, feel free to write them on the back of the survey. Thank you for your cooperation.

Please circle the correct answer, or fill in the blank.

- 1) How long have you been involved with a self-directed work team? \_\_\_\_\_
- 2) Gender: Female or Male
- 3) Age: 20-30    31-40    41-50    51 and above
- 4) Amount of years with company \_\_\_\_\_
- 5) Are you the current team leader? Yes or No
- 6) Do you use a team leader management style? Yes or No
- 7) If not what style do you use? \_\_\_\_\_

Using the scale below, circle the number which corresponds with a true assessment of your team.

5=strongly agree, 4= agree, 3=neutral, 2=disagree, 1=strongly disagree

- |                                                                                                                                                  |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1. Everyone on my team knows exactly what the team's mission is.                                                                                 | 5 4 3 2 1 |
| 2. The team leader consistently lets the team members know the degree to which the team is meeting the customers' needs.                         | 5 4 3 2 1 |
| 3. If outsiders were to describe the way we communicate within our team, they would use such words as "open," "honest," "timely," and "two-way." | 5 4 3 2 1 |
| 4. Everyone on my team has a equal amount of say or influence on decisions that affect his or her job.                                           | 5 4 3 2 1 |
| 5. Team members have the skills they need to accomplish their job tasks within the team.                                                         | 5 4 3 2 1 |

Using the scale below, circle the number that corresponds with a true assessment of your team.

5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree

- |                                                                                                                                                                                    |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 6. Team members receive training for needed skills.                                                                                                                                | 5 4 3 2 1 |
| 7. Everyone on the team knows and understands the team's priorities.                                                                                                               | 5 4 3 2 1 |
| 8. As a team, we work together to set clear, achievable, and appropriate goals.                                                                                                    | 5 4 3 2 1 |
| 9. I would rather have the team decide how to do something rather than have the team leader give step-by-step instructions.                                                        | 5 4 3 2 1 |
| 10. As a team, we are able to work together to solve conflicts rather than ignoring them.                                                                                          | 5 4 3 2 1 |
| 11. The role of each team member is understood by the whole team.                                                                                                                  | 5 4 3 2 1 |
| 12. The team understands what its role is in the organizational plan.                                                                                                              | 5 4 3 2 1 |
| 13. If my team doesn't reach a goal, I'm more interested in finding out why we have failed to meet the goal, than I am in blaming a team member.                                   | 5 4 3 2 1 |
| 14. The team has so much ownership of the work that, if necessary, we would offer to stay late to finish a job.                                                                    | 5 4 3 2 1 |
| 15. The team leader encourages every person on the team to be open and honest, even if people have to share information that goes against what the team leader would like to hear. | 5 4 3 2 1 |
| 16. There is a good match between the capabilities and responsibilities of each person on the team.                                                                                | 5 4 3 2 1 |
| 17. Everyone on the team is working toward accomplishing the common goals.                                                                                                         | 5 4 3 2 1 |
| 18. The team has the support and resources it needs to meet the customers needs.                                                                                                   | 5 4 3 2 1 |
| 19. The team knows as much about what's going on in the organization as the team leader does, because the team leader always keeps everyone informed.                              | 5 4 3 2 1 |
| 20. The team leader believes that everyone on the team has something to contribute, such as knowledge, skills, abilities, and information.                                         | 5 4 3 2 1 |

Using the scale below, circle the number that corresponds with a true assessment of your team.

5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree

- |                                                                                                                 |           |
|-----------------------------------------------------------------------------------------------------------------|-----------|
| 21. Team members clearly understood the team's unwritten rules on behavior within the group.                    | 5 4 3 2 1 |
| 22. Do you feel the traditional compensation/reward system would be effective for your self-directed work team? | 5 4 3 2 1 |
| 23. Do you feel that a special recognition system would be effective for your self-directed work team?          | 5 4 3 2 1 |
| 24. When becoming self-directed my self-esteem improved?                                                        | 5 4 3 2 1 |
| 25. Members of the team are viewed with more respect by their peers because they are self-directed?             | 5 4 3 2 1 |

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