AC 2010-544: WOMEN AND LEADERSHIP: PREPARING (FEMALE) STUDENTS FOR THE LEADERSHIP CHALLENGE

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Women and Leadership: Preparing (Women) Students For the Leadership Challenge

Abstract

The workplace can provide many career opportunities and challenges for graduating students. While pursuing their careers, many engineering and technology students will perform roles that are outside their principal academic field of study. In addition to having to deal with career issues related to global competition and technological change, an additional concern students are likely to encounter is leadership development. The recent global recession has highlighted the need for students to develop leadership skills for successful careers.

In today's competitive and dynamic economy, quality leadership is an integral component for not only career success, but also organizational success. Leaders are the principal problem solvers and decision makers, and can have a significant impact on the success of every organization in every industry. As future leaders of business organizations, it's important for students to have an understanding of the leadership roles they will perform in the workplace.

Recognizing the future leadership roles of students, it's essential that they have an understanding of the various leadership situations they may encounter in the workplace. For success in these supervisory roles, students must develop leadership skills in order to effectively respond to different supervisory situations. Fortunately, faculty can facilitate the development of leadership skills for students.

Additionally, as the number of female engineering and technology students entering the workforce increase, they will also be confronted with the responsibility of performing leadership roles. As the paper will explain, women supervisors face additional challenges that influence how they should respond to various situations. The paper will provide ideas on how engineering and technology faculty can incorporate leadership concerns into their courses to help prepare students, especially female students, for leadership responsibilities in the 21st century workplace. The paper will focus on helping students become aware of common supervisory situations they may encounter in the workplace. To help prepare students for their future careers, the paper will identify strategies students can use to deal with different supervisory situations, with emphasis on women supervisory concerns.

Introduction

Lean manufacturing, corporate downsizing, offshore outsourcing, technological innovation and global competition are some of the career challenges confronting today's graduates. To effectively deal with these challenges, students will need to develop their leadership skills [1]. Although many engineering and technology programs do an excellent

job of preparing students for the technical aspects of their professions, an area that is not adequately covered is leadership development. Not only is leadership development a challenge for engineering and technology students, it's a concern for graduates of every academic program.

The future workplace has many career opportunities and challenges for graduating students [6]. Developing leadership skills is a rising concern students need to address for successful careers. As future leaders of business organizations, it's important for students to have an understanding of the leadership roles they will perform. At the same time, female supervisors face additional leadership challenges that can impact their effectiveness in supervisory positions. The gender of a supervisor can be an important factor in determining how to respond to different leadership situations [15].

To be successful, graduates must have an understanding of leadership and possess the requisite skills for supervising in a dynamic workplace. To meet the leadership challenge, faculty will have to take the initiative to prepare students for their future leadership roles. As the paper will describe, there are many ways faculty can integrate leadership development into their courses.

Leadership and Engineering and Technology Students

Because many engineering and technology students will eventually assume leadership positions with their prospective employers, leadership development is a vital component for the future success of these students [3]. It's important for students to understand the various leadership roles they will assume during their careers and how to supervise in a dynamic workplace. Therefore, engineering and technology faculty have to provide students with both the technical skills for their principal fields of study and training to develop effective leadership skills. Leadership development can have a long term impact, not only on the careers of students, but the success of their organizations.

Define Leadership

Although there are various definitions of leadership, most definitions have certain characteristics in common. Many definitions of leadership include the ability to influence the behavior of others in a certain direction or to achieve certain goals [17]. When considering what leaders do, influencing employee behavior and achieving organizational goals are paramount responsibilities of supervisors and managers in the workplace.

Compare Male and Female Leadership

Although male and female supervisors confront similar leadership situations, gender can impact how a given situation should be addressed. Along with the concerns supervisors must deal with in general, female supervisors face additional challenges that are not normally encountered by male supervisors. Table 1 identifies additional challenges typically encountered by female supervisors [15, 19].

Table 1: Additional challenges encountered by female supervisors

• Employment discrimination: women are more often the victims of discrimination
• Workplace harassment: women are often subjected to both physical and psychological harassment by employees and other supervisors
• Family needs: women are often confronted with the challenge of balancing family and workplace concerns
• Negative stereotyping: women tend to be victims of negative stereotyping, including: the perception of not being competent leaders, the perception of not being the primary breadwinner of the family, being in the wrong occupation (supervision is a traditional male occupation), and being too family-oriented instead of career minded
• Stress: discrimination, harassment, balancing family needs, and negative stereotyping impose more stress on women
• Double standards: women are often the victims of double standards, including: 　1. being viewed unfavorably in workplace romantic relationships 　2. being view negatively in workplace friendships with males 　3. expected to do twice as much as their male counterparts for the same pay 　4. actions and decisions of women supervisors being second-guessed more often 　5. life experiences of women are not valued to the same degree as the experiences of men

While female supervisors have additional challenges not encountered by male supervisors, women also possess certain strengths in comparison. Table 2 lists strengths female supervisors possess when compared with male supervisors [15, 19].

Table 2: Strengths female supervisors possess

• Communication advantage: women are more fluent (speak more words per day) than men
• Creativity: women tend to use more right-brain thinking than do men
• People skills: women are able to relate to different people more effectively than do men
• Empathy: in addition to being more communicative and traditionally having less power than men, women are better able to relate to others
• Time management skills- women have more experience in multitasking
• Stress and crisis: women have developed the ability to better deal with stress and crisis situations than men
• Better listeners: due to their communicative skills, women tend to be more effective listeners
• Mentoring skills: women are better able and more willing to provide advice to employees on career and family related matters
• Patience: having less power, and better communication and empathy skills, have enabled women to develop patience

Common Supervisory Situations and Strategies

To help prepare students for their future careers, the authors have identified common supervisory situations leaders may encounter and strategies they can use to effectively deal with them [5, 14]. Additionally, emphasis is placed on how female supervisors should respond to these different supervisory situations [10].

1. Company Policies and Procedures

Situation: When confronted with a work-related situation requiring the supervisor to take action or make a decision, how should that supervisor initially proceed? Many supervisors, especially new or inexperienced supervisors, are sometimes indecisive on how to deal with certain situations or employees. Additionally, because supervision is generally considered to be a male occupation, many employees tend to believe female supervisors are more indecisive compared to male supervisors.

Strategy: A supervisor's ambivalence on how to proceed with a given situation can be reduced by having a clear understanding of the company's policies and procedures. Understanding the policies and procedures of an organization can give a supervisor confidence on how to proceed in a given situation.

It's important for supervisors, especially female supervisors, to become familiar with the employer's policies and procedures [16, 20]. The policies and procedures of a company can often give the supervisor insight on the culture of that organization. The policies and procedures of an organization play an important role in every supervisory action or decision, and therefore influence the day-to-day operations of the organization. Policies and procedures provide guidelines that govern employee, supervisor and employer behavior. Understanding the policies and procedures of the company can facilitate the various leadership roles a supervisor will undertake. This is especially true with unionized workplaces, where collective bargaining agreements impact virtually every aspect of employee and management relations.

Prior work experience with other companies can facilitate a supervisor's understanding of his/her current employer's policies and procedures. However, even for experienced supervisors, it should never be assumed that their previous employer's policies and procedures are identical to those of their current employer.

2. Informing the Supervisor

Situation: Employees need to understand when and what information should be provided to supervisors. Supervisors should be made aware of any work related concern that may result in a production slowdown or shutdown, including individual employee problems that may escalate into major concerns [12]. Unfortunately, a common problem arising for female supervisors is the failure on the part of some employees to timely inform them of production or employee related problems.

Strategy: Supervisors should make it clear to employees of the need to be informed of production and employee related concerns. At the same time, supervisors should communicate and interact with employees on a regular basis to develop trust and positive work relationships. Fortunately for female supervisors, most possess effective communication and interpersonal skills which can facilitate information gathering[15, 19]. While periodically reminding employees of the need to be informed, sometimes it may be necessary for supervisors to put the information request in writing.

3. Administering Discipline

Situation: There are many instances when it is necessary for a supervisor to administer discipline or corrective action. Examples include poor employee performance, violations of workplace rules or insubordination. Insubordination can include situations where employees intentionally attempt to undermine the authority of the supervisor or when they disobey a direct supervisory request.

Strategy: Supervisors should view each disciplinary situation as a training opportunity. At the same time, training should be an on-going practice for the development of every employee. Therefore, supervisors should engage in training and mentoring on a regular basis. Immediate action by the supervisor can help to correct poor performance or behavior problems before they become habitual and escalate into major disruptions.

Supervisors need to be consistent and fair in the administration of corrective action. Because many companies have policies and procedures governing disciplinary situations, it's important for the supervisor to become familiar with those policies and procedures. For female supervisors, many disciplinary situations can be the result of them not being taken seriously by employees, especially male employees. Because of their gender, female supervisors need to prove themselves as being competent leaders and able to follow through with any disciplinary action initiated [7].

4. Appraising Employee Performance

Situation: A recurring responsibility for supervisors is the need to appraise the performance of employees. Occasionally the gender of the supervisor can become an issue for some employees during the evaluation process. Some employees may believe that female supervisors do not fully understand the responsibilities of employees or are gender-bias in appraising their performance [18].

Strategy: It's imperative that supervisors evaluate employees on objective and job related criteria that employees are aware of in advance. This will help to alleviate any allegations of bias or incompetence on the part of the (female) supervisor. It's important that supervisors provide continuous feedback to employees on their performance. During the formal appraisal process, the feedback given to employees on their performance should not come as a surprise. Instead, the formal appraisal session should be conducted as a summary of the on-going feedback given to employees throughout the appraisal period.

5. Team Building

Situation: Helping employees to work as effective members of a team is an important aspect of leadership and organizational success. Team building requires that the supervisor assume the role of a facilitator or resource person while relinquishing direct control of the team to the employees. Because of the challenges most female supervisors experience while progressing through the ranks to finally assuming a leadership role, it can sometimes be difficult for them to relinquish direct control. After all, the supervisor is still ultimately responsible for the outcome of the team's performance.

Strategy: Supervisors need to remember that relinquishing direct control of the work group can make the supervisor more productive by allowing him/her more time to deal with other matters. At the same time, employees will assume more responsibility for team outcomes and have the opportunity to develop other valuable skills. While trusting the employees to be responsible for team performance, it's important for the supervisor to continue to monitor the team and be available as a resource person. As is true with any new endeavor, including team building, there will be a learning curve involved in the team development process.

To ensure effective team building, team goals need to be established, employees need to be aware of and accept their team roles, team performance must be monitored on a continuous basis, and timely feedback must be provided on team performance [4].

6. Enforcement of Workplace Rules

Situation: Enforcing workplace rules is a major function of the supervisor, including the enforcement of safety rules. Many employees believe they can work effectively and safely while taking short cuts and ignoring safety rules. Female supervisors may encounter difficulty in the enforcement of rules because some employees believe women lack the necessary assertiveness.

Strategy: The enforcement of workplace rules, including safety rules, is an on-going concern for all supervisors. As is true with corrective action, it's important for the supervisor to be consistent in the enforcement of workplace rules, along with providing an explanation for those rules [20]. In addition to consistency, female supervisors have to exercise assertiveness when enforcing workplace rules. Also, the supervisor should act as a role model in the observance of all rules. Leading by example is vital for the supervisor to ensure employee compliance with workplace rules.

7. Discrimination and Reverse Discrimination

Situation: Women are the primary victims of workplace discrimination and harassment [2]. The irony for many female supervisors is that male employees will sometimes complain of gender discrimination or reverse discrimination by female supervisors.

Strategy: To minimize complaints of discrimination and harassment, supervisors need to base all employment decisions on objective and job related criteria [13]. At the same time, to promote a nondiscriminatory work environment, the supervisor should act as a role model in demonstrating gender-neutral behavior. Encouraging open communication can help to create a positive and nondiscriminatory work environment.

8. The New Supervisor

Situation: Eventually, every supervisor will find him/her self in the situation of being the new supervisor in the organization, department, or work group. As the new authority figure, many supervisors may be looked upon by employees with skepticism in their ability to lead. This skepticism is especially prominent when the new supervisor is a female.

Strategy: As the new authority figure, the supervisor will have to establish him/her self as competent and capable of leading the employees [17]. Often, there will be a need for the supervisor to replace any old and unproductive work habits employees have formed over the years. It's important for female supervisors to act assertively and take the initiative in establishing supervisory competence. In time, the new supervisor will become the experienced and competent supervisor that the employees will respect and accept, regardless of gender.

9. Supervisor-Employee Conflict

Situation: Resolving interpersonal conflict with employees can often appear as a never-ending dilemma. Unresolved conflicts can undermine the supervisor's effectiveness and impede the success of the organization. For some employees, gender differences can make the managing of conflict more difficult.

Strategy: Supervisors must recognize that conflict is a natural and inevitable part of interpersonal and work relationships. Although conflict cannot be eliminated, it can be successfully managed. Although there are many sources of conflict, misunderstanding is the principal source [9]. Overcoming misunderstandings requires that the supervisor develop effective communication skills, including the skill of active listening. Fortunately for female supervisors, women tend to be more effective communicators than men. Therefore, female supervisors need to capitalize on their communication skills when managing conflict.

10. Document Actions and Decisions

Situation: It's one thing to allege that something occurred in the way it occurred and another thing to prove it. There will be many situations where the supervisor will need to provide evidence that a given event occurred in a certain way.

Strategy: An important habit for supervisors to develop is to document every work related decision and action taken. It is a time-consuming process, but necessary for the

success of the supervisor [20]. The importance of documentation is especially important for female supervisors since their decisions or actions are more likely to be challenged than those of male supervisors [19]. There is no formal writing or format that is necessary for documentation. It is only necessary that a written record of workplace events be created and maintained. A simple and effective method of documentation is for the supervisor to maintain a diary or journal of daily workplace activities.

Summary of Supervisory Situations and Strategies

Awareness of the additional challenges, Table 1, female supervisors must overcome in the workplace highlights the need for extra vigilance when dealing with various supervisory situations. Female supervisors, compared to male supervisors, must recognize that their leadership competence will continuously be tested and evaluated by the employees. However, as Table 2 indicates, women also possess certain strengths that can facilitate their leadership roles. Therefore, female supervisors need to capitalize on their strengths when dealing with employees and workplace situations.

Female supervisors must continue to use patience and act assertively while performing their leadership roles. Additionally, effective communication skills, providing on-going performance feedback, familiarity with company policies and procedures, documenting actions and decisions, and demonstrating fair and consistent behavior can also help to ensure supervisory success. Fortunately, the strengths women possess can be combined with leadership development to create competent female supervisors. In time, the employees will come to accept anyone demonstrating competent leadership, regardless of the gender of that leader.

Role of University Faculty

Faculty can play a major role in preparing students for their future leadership responsibilities. In addition to providing students with the technical skills for their respective fields of study, there are many ways that engineering and technology faculty can help to prepare students to deal with their future leadership positions [8]. Creating awareness by the faculty of the various career paths available to students is the first step in leadership development [11].

Faculty need to become familiar with the issue of leadership and creative in identifying opportunities to incorporate a discussion of leadership into their courses. Fortunately, there are many occasions where faculty can raise the topic of leadership. For example, the issue of leadership can be raised with various class assignments or discussions involving project management, women or minorities in engineering, careers in engineering, supervision, teamwork, safety management, organizational communication, employee training, goal setting, motivation and related topics involving employee interactions. Some specific ideas for incorporating the discussion of leadership into various engineering and technology courses are identified.

1. Leadership Roles: Faculty can discuss leadership during any discussion about the different leadership roles students will assume in the corporate world while working on various engineering projects. When discussing the future leadership roles engineering and technology students will assume throughout their careers, faculty can help to make students aware of the importance of leadership and its effects on employees, the project and the organization.

2. Teamwork Assignments: When students are given group assignments that require them to work together, the instructor can use the opportunity to discuss teambuilding and other aspects of leadership.

3. Other opportunities for faculty to raise the issue of leadership in their courses may include the following:

- During the course introduction, instructors can raise the issue of leadership when discussing positive classroom behavior and the importance of taking the initiative in the course. The class can be viewed as a team with certain students demonstrating the behaviors of effective (class) leaders. Since leadership is about influencing others and achieving goals, the instructor can use different students as examples of positive leaders.
- If students are currently employed, a discussion about the products or services offered by their companies can facilitate an understanding of the various leadership roles students may undertake during their careers. Discussing the policies and procedures of their employers can lead to issues involving leadership.
- While discussing career opportunities in engineering and technology, instructors can invite guest speakers to talk about the importance of leadership development.
- Instructors can require student research assignments and presentations on work related concerns and/or career challenges, including various leadership situations students may encounter in the workplace.
- Experiential learning has become an important agenda in academia. Therefore, instructors can incorporate a discussion of leadership situations as an experiential course assignment. The instructor and students can discuss various leadership situations as examples of real life, work-related experiences.
- The instructor can incorporate multidisciplinary learning into their technical courses and help students learn about other career related concerns. For example, the instructor can develop a "current topic assignment" where students are required to research or discuss a non-technical topic related to their careers. When assigning the non-technical topic, the instructor can include the topic of leadership.

Conclusion

In today's competitive and dynamic economy, quality leadership is an integral component for not only career success, but also organizational success. As future leaders of business organizations, it's important for students to have an understanding of the leadership roles they will perform in the workplace. Although both male and female

graduates will be confronted with the responsibility of performing leadership roles, female supervisors face additional challenges that influence how they should respond to various situations. At the same time women possess certain strengths that can facilitate their supervisory roles.

Due to its far reaching effects on the careers of students and success of the organization, leadership development is an important topic that faculty need to address. Fortunately, leadership development can be integrated into the curricula of most engineering and technology courses.

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