The Pennsylvania State University

The Graduate School

PERCEPTUAL PATTERNS OF

INVOLVEMENT MANAGEMENT AND EFFECTIVENESS

IN PUBLIC HIGHER EDUCATION

A Thesis in

Public Administration

by

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Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

August 2006

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ABSTRACT

The limitations of the traditional hierarchical method of organizing have been documented in the public administration literature. Criticisms include; inefficiencies, goal displacement, de-personalization of employees and customers, and the lack of innovation. Involvement management has been offered as a solution to address some of these organizational ills. Involvement management can be viewed as an umbrella concept that encompasses many different management approaches. The core concept is that positive organizational outcomes will result when a wider number of employees are actively participating in making meaningful decisions. One specific model of involvement management has been developed by Edward Lawler. His model is predicated on building organizations utilizing techniques that distribute the elements of involvement management (power, rewards, information, and knowledge) throughout the organization. The current research project takes Lawler's High Involvement management model and adds a new concept to it, namely organizational commitment. The model is then tested in a traditionally more participative setting to investigate the proposition that effective organizations will naturally have power, rewards, information, knowledge, and organizational commitment present at all levels. An exploratory research effort was designed to test three hypotheses by surveying employees at four public higher education institutions that are a part of a large Northeastern independent university system. Though exploratory in nature, the findings provide strong support for the relationship between organizational commitment and the elements of involvement management, but little support for the link between organizational effectiveness, organizational commitment and the elements of involvement management.

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"I will chose a path that's clear, I will chose free will."

<div align="right">- Neil Peart</div>

CHAPTER 1 – INTRODUCTION

The pathologies associated with the bureaucratic form of organizing are well documented in the literature of organizational theory and public administration. In response to these deficiencies, organizational scholars have attempted to develop alternative models of organizing that would nullify many of the negative consequences of this form of organization. Many of these models center on design parameters that encourage organizational members to participate in decisions affecting their working lives. Participation can be placed along a continuum that varies between solicitation of employee opinion on a specific issue to the broader idea of extensive employee involvement in a wide range of organizational decisions, practices and strategies. This latter end of the continuum, labeled involvement, is not narrowly confined to the study of decision-making processes; it is a more holistic and systemic perspective of participation. Involvement is based on the idea that if organizational members are included in as many aspects of managing the enterprise as possible, the organization will be more effective. Some scholars feel that a high degree of involvement requires a radical reworking of the organization's personnel, reward, production and information systems.

This chapter first provides a background of the research problem. This will be followed by a description of the conceptual model used to guide the research process.

Since the model draws heavily on the work of Edward E. Lawler III, a review and critique of some of his major works is included. The next section presents a high level overview of the research project methodology. The chapter concludes with a discussion of the value and relevance of the research project.

Identification of the Research Problem

The introduction to this project briefly alluded to the problems associated with the traditional bureaucratic form of organizing. This organizational design relies primarily on the issuance of top-down commands and the close supervision of employees as the means for controlling organizational behavior. As this organizational design model was replicated in various settings, it became apparent that it was not the best design for all situations. As a prescription to address the ills of the traditional form of organizing, organizational scholars offered design models that incorporate participation practices. By including organizational members in more decision-making processes, it was theorized that organizations would become more effective as employees controlled their own behavior.

Involvement is a form of participation that includes employees in the widest range of substantive decision-making processes and is theorized to lead to higher levels of effectiveness. The research problem addressed by this paper is to examine the relationship between involvement practices and organizational effectiveness and to clarify the role organizational commitment plays in this relationship. The next section will provide a more detailed background of the research problem.

Background of Research Problem

Traditional methods of organizing in the United States have their roots in the period of time when the economy shifted away from a simple agrarian base to a complex manufacturing base. This transitional period, collectively referred to as the Industrial Revolution, gave birth to the field of organization theory as a scholarly pursuit. As work processes became more complex and interdependent, various organizational issues emerged. These issues served to widen the scope of organization theory subjects.

The First Industrial Revolution, which started in England in the mid-to-late 1800s, established the factory system. (Chandler n.d.; Leighton 1970, p. 3) The factory system represented a major change in work processes as workers were gathered under one location and emphasis shifted from hand made goods to items made by capital intensive processes. (Great American n.d.-b; Donkin 2001, p. 68; Leighton 1970, p. 3) Before that time, work was primarily craft based, with goods being produced by hand by artisans in their home or workshops and then directly sold to consumers. (Great American n.d.-a) Workers learned a particular line of work through apprenticeships with a person who was thoroughly familiar with all aspects of their craft. (Donkin 2001, p. 31) Individuals had control over their work processes. The factory system introduced new dynamics into the work place, as the owner of productive means had their workers concentrated in one area and with the introduction of machinery, the owners were the ones controlling production, not the individual craftsmen. (Tucker 2005, p. 21; Donkin 2001, p. 68; McKenna 1991, p. 4; Clark and Hays 1988, pp. 13-15)

The Second Industrial Revolution, which took place in the late 1800s and early part of the 1900s (Chandler n.d.; Leighton 1970, pp. 3-4), saw the rise of large, capital

intensive industries such as steel, chemicals, and machinery manufacturing. (Galambos 2005, p. 7; Chandler n.d.) Due to the nature of these industries, organizations had to be of sufficient size and capacity in order to take advantage of economies of scale.(Chandler n.d.)   The owners of these organizations wanted to mass produce their goods at the lowest cost possible in order to maximize their profits. The craft method of establishing work processes and transmitting work knowledge was not viewed as efficient or cost effective during the Second Industrial Revolution. Thus the first vestiges of organizational thought concentrated on improving the efficiency of work processes.

Traditional Organizational Thought

Organizational thought in the early 1900s was deeply influenced by Frederick Taylor's scientific management principles. With the overall goal of efficiency in mind, Taylor wrote that one of management's duties was to analyze work processes so they could be dissected into simplified, discrete steps. (Taylor 1967, p. 7 & pp. 39-40) Managers then had the responsibility for planning work, while all the workers had to do was follow their directions. This was a departure from the traditional craft method, where the worker determined what was to be done and how to do it. From an organizational design perspective, the result of scientific management was the creation of layers of management to supervise and control all the steps of work processes as well as decision-making in general.

Managerial control was a key tenet for other organizational theorists through the mid-part of the 20th century. Scholars such as Weber, Fayol, and Gulick reinforced the notion that organizations should be structured on the premise that managers were needed

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to control and supervise the actions of employees, who were viewed primarily as replaceable cogs. (McKenna 1991, p. 5) Weber's writings introduced the term "bureaucracy," which came to be identified with organizations that structurally resembled tall pyramids. Bureaucracy as an organizational model, achieved control through hierarchical supervision and the adherence to rules and regulations. (Gerth and Mills 1958, p. 196-197) Workers, as long as they were properly trained, could easily do the job. Organizations that used the traditional "command and control" methods of organizing had success, with American manufacturing industries becoming the economic engine that propelled the Allies towards victory in World War II. But it was becoming evident to some organizational scholars that the principles of organizing followed by successful manufacturing industries did not always produce the best organizational form in all cases.

Shortcomings of Traditional Methods of Organizing

As the traditional bureaucratic command-and-control model of organizing was replicated in various organizational settings, dysfunctions became apparent in some situations. These dysfunctions include; rigidity, forcibly induced conformity, and alienation of participants (Denhardt, 1994); excessive rules that constrain behavior and cause organizations to be unresponsive to environmental change (Barker 1993); underutilization of human potential (Morgan, 1986); organizational ineffectiveness and worker dissatisfaction, (Lawler, 1983); lack of innovation (Thompson, 1969); institutionalization of procedures and practices that have been successful in the past but become inappropriate solutions to new problems, (Merton, 1957); communication distortion and resistance to change (Dimock, 1952); and impersonalization and goal

displacement (Gouldner, 1952). These types of dysfunctions have their roots in the structural components of early organizational thought.

Scientific management's organizing principles were guided by efficiency. Bureaucracy as an organizing model was all about efficiency. The target for both was organizational processes. A key premise of organizing was control through managerial supervision and decision-making. As organizations became larger, they consisted of a multitude of hierarchically arranged departments. These departments were restricted in size due to the principle of span of control, which predicated limits on the number of employees a manager could realistically supervise. (Gulick 1987, p. 83) As the number of employees increased, so did the number of managers. Due to the proliferation of organizational units, upper level managers were faced with more difficult challenges in maintaining control and ensuring organizational goals were met. According to organizational thinking at the time, control was accomplished by spelling out exactly what the employees did and then closely supervising them to ensure they did it. An unintended consequence of these excessive rules, regulations and procedures was that they could displace the overall purpose of the organization and become ends in themselves. (Gouldner 1952)

Another unintended consequence of having organization control vested in hierarchical supervision and detailed rules and procedures was the inability of the organization to react to change. (Merton 1957) Rules and procedures became patterns of action to take by organizational members, ones that they have been directed to follow by their superiors. Bureaucratic organizations could deal with expected circumstances, but employees had no procedures to follow for unanticipated situations. If rewards

and/or punishments are controlled by supervisors, and in part depend on adhering to the prescribed rules and regulations, there is strong incentive for employees to act as they always have in the past. (Lawler 1983, p. 1254-1259) Information flows in multi-level hierarchical organizations also contribute to an organization's inability to react to change. Information and decision-making in classically designed organizations tend to be centralized at the top and flows downward. (Lawler 1986, p. 6) Thus whenever a novel situation is encountered, one not covered by specific rules and procedures, lower level employees should communicate this upward for specific directions. This process may be hindered by a lack of a formal upward communication mechanism. (Likert 1961, p. 46) Then once aware of the situation, upper management must develop a response to this new situation and communicate it downward. It takes time for this information to flow up and down a hierarchy, especially one with many levels. This increases reaction time to new situations.

In addition to process oriented dysfunctions, traditional hierarchical organizations have people-oriented dysfunctions as well. From the employee perspective, working in a traditional hierarchical organization was not very stimulating or interesting. Constantly being told what to do and when to do it even created resentment among the workers. Managers never considered the work process from the employees' perspective. Workers were viewed as replaceable cogs in the machine. (Donkin 2001, p. 233) Management concern at the time was focused on streamlining work process to make them efficient as possible, not on creating a positive work environment for the employees.

As the 20th century progressed, organizational scholars began to realize that bureaucratic organizations were not making use of the potential in each person. Elton

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Mayo and the Hawthorne studies initially identified the importance of the human side of organizations.   Authors such as Likert, McGregor, and Argyris advocated the consideration of the human element in organization theory. These authors argued that organization theory was based on erroneous assumptions regarding the nature of workers. When it came to work, people could be motivated to perform by other than purely economic means and they did not have to be closely supervised in order to make sure they completed their job. The above scholars recognized that people were an integral part of an organization and that new perspectives on organizing needed to be developed. What really drove the need to develop new ways of organizing were larger changes in society, specifically changes in work processes and improvements in the general education levels of workers.

Forces Driving the Re-Thinking of Methods of Organizing

Theorists realized that traditional organization principles could not be transferred to every organizational setting because of larger forces causing change in society. The traditional method of organizing, relying on managerial direction and control of work, was based on two static assumptions. One had to do with the role of non-management employees, the other had to do with work process technology.

The classical bureaucratic-mechanistic organization viewed people as a part in a machine, one that was easily replaced by another similar (i.e. properly trained) part. In the early part of the 20th century, most people were not educated and readily accepted any job in order to make a living. As levels of education increased throughout the United States during the 1900s, at both the high school and collegiate levels, people began to

expect more from the employment experience. (Goldin 1999, pp. S68-80; Mosher 1982, pp. 41-55) This was especially true after World War II where many returning soldiers made use of the GI bill and went to college. Simple unskilled or semi-skilled jobs did not appeal to people whose horizons were broadened by education.

As society was becoming more educated in general, the general nature of work processes in the United States were changing as well. Due to changes in technology, combined with a shift from an agrarian based economy to a manufacturing based economy and ultimately to a service based economy, work was becoming less physical and more knowledge based. (Cohen and Mankin 1998, pp. 156-157; McKenna 1991, p. 6) Managers could no longer be expected to have the expertise to plan and control work. Given changes in technology and society, the traditional organization design was not a proper fit in all cases. Organization theory had to adjust to changing realities.

Employee Participation as a Solution

One possible solution offered by organizational theorists to address the people-oriented and process-oriented dysfunctions associated with classically designed organizations was to have employees participate more in organizational decisions. The reasoning behind this school of thought was that greater employee participation would lead to greater organizational effectiveness by tapping the expertise of the people who were actually doing the work and by securing their commitment because they helped to make the decisions affecting their work lives. And as an added bonus, employees wouldn't be as bored at work because they were not treated as replaceable automatons. A

major question that needed to be answered by organizational theorists was how much participation should employees have?

As will be seen in Chapter 2, the literature on employee participation can be characterized as being in a fluid state, with little conceptual clarity. Three terms emerge from the literature, participation, empowerment, and involvement. In some cases, these terms are used interchangeably, in other cases they are distinctive and unique. These terms can serve as the basis of a continuum to visualize the degree of employee participation in organizations. Organizational practices that allow employees to voice their opinions on work related issues, with management under no obligation to act upon those opinions, can be labeled as participation. Empowerment takes participation to another level. Here, employees not only are allowed to voice their opinions, but actually have some degree of power to make decisions. Involvement represents an even higher level of participation. Employees not only have power to make decisions, but they participate in a much wider range of organizational decisions, from organizational strategy to everyday work place issues.

The above continuum of participatory approaches to organizational practices can be used as a lens to make sense out of the disjointed character of the participation literature. One scholar, Edward E. Lawler III, has done extensive research on organizations that utilize practices that fall on the involvement end of the above continuum. (Lawler 2003, 1999, 1996a, 1996b, 1994b, 1992, 1988, 1986) His writings provide the basis for the conceptual model used in this research project. In the next section, a review of Lawler's work on involvement will be presented. Drawing upon that

literature review, the conceptual model used in this research project will be discussed in the subsequent section.

Lawler's Contemporary Approach to Organizing

Edward E. Lawler III has written extensively on a number of issues regarding organizational theory and design. He has concentrated on such areas as quality of work life (Mirvis and Lawler 1984, pp. 197-212; Nieva, Perkins and Lawler 1980, pp. 43-52), compensation systems (Bullock and Lawler 1984, pp. 23-40; Lawler 1966, pp. 11-22), human resource management (Lawler and Mohrman 2003, pp. 15-29; Lawler and Mohrman 2000, pp. 10-20; Mohrman and Lawler 1997, pp. 157-162), employee involvement (Lawler 1999, pp. 18-20; Bowen and Lawler 1995, pp. 73-84; Bowen and Lawler 1992, pp. 31-39; Mohrman and Lawler 1989, pp. 225-272; Lawler 1988, pp. 197-204; Lawler, Benwick and Bullock 1981, pp. 115-123), Total Quality Management (Mohrman, Lawler and Ledford 1996, pp. 6-10; Lawler 1994b, pp. 68-76) and new approaches to organizing (Mohrman, Galbraith, and Lawler 1998; Lawler 1996b; Lawler 1994a, pp. 3-15; Lawler 1993; Lawler 1992; Lawler and Ledford 1987, pp. 46-51; Lawler and Mohrman 1987, pp. 293-300; Lawler 1986; Lawler 1974, pp. 31-39). There is one unifying theme to his writings, which is finding ways to make organizations more effective in a competitive environment through organizational designs that make better use of human resources. (Lawler 1992, p. 3) A review of his work indicates that Lawler advocates organizational designs that focus on a high level of employee involvement as a way to tap the full potential of each person and direct it towards organizational

effectiveness. One of the underlying premises of Lawler's position is that classically designed organizations, built on bureaucratic command and control principles, are not suitable in all instances because of three reasons, 1) the competitive environments faced by most organizations, 2) the state of information technology available, and 3) the globalization of the world economy. The next section will discuss these environmental characteristics.

Environmental Characteristics Facing Today's Organizations

Lawler writes that organizations are faced with extremely competitive environments and in order to survive, they need to quickly position their goods or services in the market place (Lawler 1996b, p. 8; Galbraith and Lawler 1993, p. 9; Lawler 1992, pp. 20-21), to be cost competitive (Lawler 1992, pp. 17-18), to be innovative (Lawler 1996b, p. 8; Galbraith and Lawler 1993, p. 9; Lawler 1992, pp. 19-20) and to produce quality goods and services. (Lawler 1996b, p. 8; Galbraith and Lawler 1993, p. 9; Lawler 1992, pp. 18-19) Organizations that rely on management supervision and the establishment of rules and procedures to control employee behavior find that this method of control does not work in an environment that requires rapid decisions to address changing situations. Lawler argues that traditionally designed organizations are better suited for stable environments, not turbulent ones. Decision-making power is concentrated at the top, and people at the top have limited time and attention. It takes time for information to flow from the environment, to the decision maker, who makes a decision and then communicates the plan for action down through the hierarchy where it

is transformed into rules and procedures to follow. In a competitive environment, slow reaction to change could be disastrous.

The state of information technology is the second environmental characteristic that can cause problems for organizations using bureaucratic based controls. (Lawler 1994a, pp. 4-5; Galbraith and Lawler 1993, p. 9) The widespread availability of computing power and the ease of information transfers can overwhelm hierarchical organizations. Again, the structural design of the hierarchical organization is not designed to process that much information. People at the top of the hierarchy are the ones who control information and then selectively directs it downward to lower levels. (Lawler 1986, p. 6) Unlike the past, where getting information was a problem, information technology today can produce so much information the problem now involves processing massive amounts, filtering out extraneous data and then communicating the relevant information to the rest of the organization. In addition, advances in information technology has rendered many managerial and supervisory jobs obsolete. Today's computers can collect, analyze, and distribute controlling information in seconds, whereas it could take a human being hours or even days.

The third contemporary characteristic affecting the effectiveness of bureaucratic controls is the globalization of the world economy (Lawler 1996b, pp. 9-11; Lawler 1994a, p. 5; Lawler and Mohrman 1987, p. 294). The world economy can be viewed as becoming specialized by geographic region, with some nations providing capital and expertise, while other countries are a source of a low cost labor. (Lawler 1996b, p. 10; Galbraith and Lawler 1993, p. 7) This situation can be problematic for bureaucratic controlled organizations, as managers may no longer have needed parts of the production

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process under their direct control and in some cases may be faced with skill shortages in geographical areas. (Galbraith and Lawler 1993, p. 9) An additional aspect of a globalized economy, in conjunction with improved information technology, is that it breaks down geographic boundaries. (Galbraith and Lawler 1993, p. 9) Classical organization principles were developed during a time when production processes were assumed to be all in the same geographical area. With the advent of information technology, knowledge-based work processes are more easily decentralized, and thus it is difficult for managers to control the actions of organizational members through hierarchical supervision, especially when people are not occupying the same physical space.

Lawler writes that these three environmental characteristics are requiring organizational theorists to develop a new logic to organizing. This new logic is based on employee self-control of behavior as opposed to directive control of behavior from above. The next section will discuss this new logic of organizing.

A New Logic of Organizing

Lawler argues that since organizations are faced with an environment that changes rapidly, managers cannot rely as they did in the past, on having a sustainable advantage over competitors. Long term success depends on the alignment of a string of temporary advantages. (Mohrman, Galbraith and Lawler 1998, p. 3) This operational reality requires new approaches to organizing. Lawler took a step in that direction by proposing a new logic to use in considering organizational design. This new approach to

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organizing has implications not only for structural designs, but also for the roles of

managers, staff, unions, and individuals.

Lawler's approach is based on what he calls the "new logic principles" for

organizing (Lawler 1996b, p 22-42) :

1. Organization can be the ultimate competitive advantage
2. Involvement is a more effective source of control than bureaucracy
3. All employees must add significant value
4. Lateral processes are the key to organizational effectiveness
5. Organizations should be designed around products/services and customers, not functions
6. Effective leadership is the key to organizational effectiveness, not management.

Essentially, Lawler argues that difference between controls based on bureaucracy

and ones based on involvement is how work is organized and managed at the lowest

level. (Lawler 1992, p. 28) Traditional bureaucratic-mechanistic methods of organizing

concentrate decision-making, information and rewards at the highest levels of the

organization. Managers at this level make a majority of the decisions, despite the fact

that they do not have as great a level of operational knowledge as other members further

down the hierarchy. Information does not freely move from the top to the bottom of the

organization, which can hinder responding to changing conditions. Rewards are skewed

heavily towards management. Lawler bases his organizational vision on the premise that

people will behave in ways to maximize their rewards, whether they are intrinsic or

extrinsic. (Lawler 1983, p. 1263) Lawler argues that employees will be motivated when

organizations are designed to spread knowledge, decision-making, information and

rewards to as many organizational levels as possible. (Lawler 1996b, pp. 31-32;

Galbraith and Lawler 1993, p. 181) The organization will be designed to be better equipped to deal with a highly turbulent and competitive environment.

As far as design characteristics, organizations following Lawler's logic will be flatter as levels of control are eliminated. (Lawler 1996b, p. 3; Galbraith and Lawler 1993, p. 181) As workers become more involved in substantive decisions, they assume functions that were previously performed by supervisors. (Lawler 1992, p. 61) As a result of less levels of control, the organization will also tend to be smaller and more collaborative, stressing lateral relationships. (Mohrman, Galbraith and Lawler 1998, p. 396) The transition from classical tall hierarchies with control vested in managerial supervision and detailed instructions to organizations that are flatter, smaller and collaborative with control vested in empowered employees who have the information and knowledge to make decisions, has profound implications for the roles of managers, staff, unions and individuals.

Redefining Organizational Roles

Under Lawler's conceptualization of organizing, the role of managers is not to manage per se, but to lead. In traditional organizations, managers relied on formal systems of regulations, rewards and performance measures to achieve its aims, but organizations under Lawler's new logic requires leadership which is more long-term and adaptive. (Conger, Spreitzer, and Lawler 1999, p.354) The role of leadership is to determine vision and strategy and to create understanding of the need for change and then to effectively communicate these ideas to all members of the organization. (Conger, Spreitzer, and Lawler 1999, p. 354)   Given Lawler's focus on the competitive

environment faced by many organization, he argues that companies must continually re-define and re-invent themselves in order to compete. (Galbraith and Lawler 1993, p. 65) Organizations using Lawler's logic shift many of the traditional control duties from hierarchical levels of management to self-managed teams. (Lawler 1992, p. 61) This new logic of organizing also stresses the need to find success through a string of temporary advantages. (Mohrman, Galbraith, and Lawler 1998, p. 3) It is management's role to be on the lookout for situations that will lead to these strings of temporary advantages. Instead of developing detailed work procedures to follow and looking over the shoulder of employees to make sure the work gets done, new characteristics of mangers are needed. The new characteristics needed are, the ability to challenge status quo, engage in creative visioning for the future, bring about appropriate changes in follower's values, behaviors and attitudes through inspiration and empowerment. (Conger, Spreitzer, and Lawler 1999, p. 354) In using a nautical analogy, managers need to be less concerned about rowing the boat and more concerned about where the boat is headed. The traditional organization of old needed many managers but few leaders, whereas the competitive organization of today needs few managers but many leaders. (Conger, Spreitzer, and Lawler 1999, p. 357)

Just as the role of management changes in organizations using Lawler's new logic of organizing, the role of staff units changes as well. Lawler writes that "staffs have been uniquely structured to operate in a particular type of business environment and to support particular organizational structures." (Galbraith and Lawler 1993, p. 65) Staff units, which traditionally involve the areas of finance, accounting, marketing, legal affairs, information services and human resources, often become controllers of the organization

and provide expertise to senior managers, which reinforces vertical decision-making

processes. (Lawler 1996b, p. 94-95) The changing nature of organizational control,

increased global competition, and improvements in the availability of information

technology are factors that call for "converting control-oriented staff specialists who

administer internal monopolies into businesspeople who competitively deliver strategic

services that add value to the businesses." (Galbraith and Lawler 1993, p. 65-66)

Lawler's new logic of organizing is based on organizational control shifting from

bureaucracy to self-control, which is achieved by spreading the components of

involvement (power, rewards, information and knowledge) throughout all levels of the

organization. (Lawler 1996b, pp. 31-32) Thus involved workers take over functions

previously done by supervisors and planners. (Lawler 1992, p. 61) In an era of global

competitiveness, staff organizations are considered by many to be an overhead cost, since

they produce no products and directly offer no services and thus are under constant

pressure to either lower costs (Galbraith and Lawler 1993, p. 67) or be considered for

outsourcing. (Lawler 1996b, pp. 96-97) Staff work is essentially the handling of

information and the provision of expertise. (Galbraith and Lawler 1993, p. 68) The

proliferation of information technology has automated many control processes and the

distribution of information, and as a result will mean "fewer staff members and will

certainly alter the role of those who remain." (Galbraith and Lawler 1993, p. 68) Lawler

calls for staff units to return to their original purpose, which was to provide advice and

service to actual decision makers. (Lawler 1996b, p. 95; Galbraith and Lawler 1993, p.

69) It was written above that organizations using Lawler's new logic of organizing

needed leaders instead of managers. The role of leaders is to determine vision and

strategy, and then to communicate the need for following the path laid out. (Conger, Spreitzer, and Lawler 1999, pp. 345-348) The role of staff units is not rule writing or monitoring activities, it is to provide strategic support and expertise for leaders while they identify new opportunities and carry out their strategic vision. (Lawler 1996b, pp. 94-97; Galbraith and Lawler 1993, pp. 69-73)

Under Lawler's philosophy on organizing, staff units are envisioned as becoming partners with organizational leaders to help them identify new business strategies and then to assist in communicating that throughout the organization. Lawler sees a similar role for unions in his new logic organizations. Traditionally, unions have adversarial relationships with management, mainly due to their role as acting as a counter balance to arbitrary decision-making by managers. (Lawler 1996b, pp. 279-280; Lawler and Mohrman 1987, p. 294)   Lawler credits the union movement for many of the generally accepted employment standards today. (Lawler and Mohrman 1987, p. 294) Lawler argues that the same forces driving change in organizing philosophy, namely competition, globalization of the economy, and the proliferation of information technology, are driving changes in union-management relationships. (Lawler and Mohrman 1987, p. 294) Lawler states that unions do have a place in organizations, but not as an adversary of management, rather as partners with management. (Lawler 1986, p. 213)   In an organization constructed with involvement as its core design philosophy, employees will have power to make decisions because they have the knowledge and information to make informed decisions and are adequately rewarded for their efforts. As stated earlier, bureaucratic controls are replaced by self-control. Instead of management controlling behavior by developing instruments such as job descriptions, which has

always been a major point of contention with unions, employees themselves are making the decisions regarding their work processes. (Lawler 1996b, p. 279) Lawler charges unions with aiding "in the movement of power, knowledge, information, and rewards to all employees of the organization." (Lawler 1986, p. 214) The role of unions is to "become representatives of the work force in business decision-making and assure that the inputs and views of the work force are effectively represented." (Lawler 1992, p. 299) As a partner, unions would also assist in developing and communicating the organization's mission and vision. (Lawler 1996b, p. 281) In order to become partners, union leaders need to understand the business and how employees' skills and abilities can be used to increase organizational effectiveness (Lawler 1996b, p. 282) Two areas where unions are uniquely situated to make a significant contribution involve reward systems and work processes.

Unions could cooperate with management in designing and structuring reward systems and help ensure that company and employee interests are aligned. (Lawler 1992, p. 300)   Unions are also uniquely positioned to contribute to the organization in designing work methods and job structures. (Lawler 1992, p. 300) Unions are comprised of members who possess a lot of industry specific knowledge. For example, a plumbers union would have quite a bit of expertise regarding plumbing, while a carpentry union would have extensive expertise on woodworking. This would be an excellent source of information to tap when designing work processes. Lawler goes as far as to suggest that unions take on career development and training roles, where they work to keep their members' core skills current and even develop some type of certification of those skills. (Lawler 1996b, p. 281)   Simply put, Lawler argues that union leaders need to put aside

their skills as adversaries (Lawler 1996b, p. 281) and develop new skills that help them understand the business and engage in problem solving while remaining in touch with the needs, desires, and views of their members. (Lawler 1992, p. 302)

An organization designed with the involvement philosophy espoused by Lawler is one that is small and agile, with its leaders constantly looking for new short term opportunities with its employees closely interacting with customers to deliver high quality goods and/or services in a highly competitive and global environment. Gone are the days of an organization with a sustained advantage over its competitors. High involvement organizations are more suited towards joint ventures, where several organizations work together to produce a good or service that is limited in duration. After a period of time, the joint venture winds down and each organization is free to look for other opportunities. A good example can be seen in the software industry, where several companies come together to produce a certain product or service. Microsoft Corporation has partnered with a variety of different companies to produce software tailored to specific industries. Dental offices use software developed in conjunction with dental experts to run their x-ray machines and the office appointment scheduler. Automotive dealers use software developed by Microsoft and auto experts to run diagnostics on the cars they repair. A point Lawler stresses is that organizations are constantly searching for opportunities where they can deploy teams of empowered employees to take advantage of a short term niche identified in the highly competitive, global market place. Employees can be counted to do what is best for both themselves and the organization because rewards are tied closely to team performance and

organizational objectives. They are trusted to take appropriate actions because they have knowledge and information about business operations and the environment they work in.

Just as Lawler's vision of organizing based on involvement principles had implications for the roles of management, staff, and unions, the design has implications for employees in general as well. Lawler states that under traditional methods of organizing, there was an implicit employment deal, one of life time employment as long as one did what they were told. (Conger, Spreitzer and Lawler 1999, p. 349; Mohrman, Galbraith, and Lawler 1998, p. 19; Lawler 1996b, pp. 267-268)   Lawler argues that this was possible before when the environment faced by many organizations was less turbulent and many of these organizations had a sustained advantage, such as building long term relationships with customers and developing performance strategies. (Conger, Spreitzer and Lawler 1999, p. 357) This relatively stable environment allowed organizations to offer employees long term employment. The model is well known in the United States, where a young person starts out at the bottom of the organization in a particular functional area and then over the span of his or her career, slowly climbs up the ladder. For example, a student graduates from college with a degree in engineering and starts out in a company as a junior engineer and his or her career path would lead to the head of the design department. A factory worker may start out on a line position with a career path that would take them to the floor supervisor. As long as they performed their job somewhat satisfactorily, individuals were promoted. Since traditionally designed organizations resembled tall pyramids, there were a lot of levels to move up.

In the high involvement organization, Lawler argues that employees need a wide variety of skills, not just expertise in one functional area. This is consistent with his

vision of organizing in a turbulent environment where smaller, agile organizations are on the constant look out for opportunities to pursue. The reason for this emphasis on employees with a wide variety of skills is that they are in a better position to respond to change than people who are trained in one narrow specialty. (Lawler 1994a, p. 6) In such an organization, employees are expected to have cross-disciplinary business skills, project management skills, people management skills, computer skills, marketing skills, planning skills, process improvement skills and a global understanding. (Mohrman, Galbraith and Lawler 1998, p. 396)   It is the responsibility of employees to manage their own careers and keep their skills upgraded and on the cutting edge. (Lawler 1996b, p. 270) This will not only benefit the organization as it engages and disengages in business opportunities, but it also helps organizational members maintain marketable skills in the employment market. (Lawler 1994a, p. 13)   Lawler argues that the organization does not owe its members employment rather it owes them employability, which is the chance for employees to use their skills. (Conger, Spreitzer and Lawler 1999, p. 349) In fact, Lawler argues that compensation should not be based on what job an individual occupies, but rather it should be based on the amount of skills they have. (Lawler 1994a, p. 9; Galbraith and Lawler 1993, p. 187)   This is logical, given that an involvement organization is envisioned to be smaller and flatter than traditional bureaucracies. The reason these organizations take on these attributes is because many of the traditional levels of control are eliminated and spread out among fewer employees. Employees would have to have a wider range of skills, not just in depth knowledge of a particular functional area such as production, accounting, marketing, legal, etc. A person with a wider inventory of skills

to draw upon would be worth more to an organization designed on involvement principles.

To summarize, Lawler argues that in order to survive a highly competitive, global environment where information is freely exchanged, organizations have to re-think their design strategies. Lawler's main focus is on spreading power, rewards, information, and knowledge throughout the organization instead of centralizing these elements at the top of the organization. By doing this, many unnecessary levels of overhead can be eliminated, as employees, assisted by advances in information technology, assume many control functions previously performed by supervisors. Lawler reasons that employees who have knowledge of the business and information about how it is doing, along with rewards tied to the organization's performance, could be trusted to have the power to make decisions. Upper management's roles shift from control through direction and supervision, to leading the organization through the competitive environment, looking for opportunities to engage in for as long as it is advantageous. The organization, as well as its employees, is expected to be agile, flexible and adaptable. Employees are expected to have a wide range of skills that they can draw upon to support each unique business engagement. Lawler's high involvement approach represents a new way of thinking about organizing. Lawler, even when he collaborates with other scholars such as Mohrman, Ledford and Galbraith, has been delivering a very consistent core message for several decades. That message stresses the importance of spreading power, rewards, information and knowledge throughout the organization. The discussion above reveals that he makes several strong arguments for doing this. As with any theory or

conceptualization, there are some points of criticism in the argument that need to be addressed. The next section will provide such a discussion.

Criticisms of Lawler's High Involvement Organization

Lawler's admits that his conceptualization of high involvement organizations is not applicable in all cases. It is designed for businesses that need to compete globally and increase their effectiveness. (Lawler 1992, p. 4)   Since it is designed for the highly competitive, global market place, there lies the root of the first criticism. Most of Lawler's work on high involvement has been done in the private sector, with particular focus on large Fortune 1000 companies. Lawler and his associates have been doing a periodic assessment of how the Fortune 1000 companies have been utilizing employee involvement and Total Quality Management. (Lawler, Mohrman, and Benson 2001; Lawler, Mohrman, and Ledford 1998; Lawler, Mohrman, and Ledford 1995, Lawler, Mohrman, and Ledford 1992) The methodology in these series of works is always the same, namely questionnaires sent to top management of large organizations. But the authors do recognize that the views of other members in these large organizations, as well as the views of employees in smaller organizations, are not represented. (Lawler, Mohrman and Benson 2001, p. 25-26)

A larger criticism of Lawler's work is that there has been little effort to address high involvement in the public sector, even though these organizations also face the three factors identified as driving the new logic of organizing. As stated above, Lawler argues that classical organizational designs and bureaucratic controls are not suitable in all situations due to increased competition, advances in information technology, and

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globalization of the economy. It can be argued that public sector organizations are also affected by these factors. Most public sector organizations do not operate in the true market sense, where they are competing with other organizations to provide goods and services at a profit to anyone who wants them. But this does not mean public sector organizations escape competitive pressures. Public sector organizations need to compete for scarce public resources and its managers are under constant pressure to either cut costs or outsource services yet still provide timely, innovative, and high quality public goods and services.

Improvements in information technology has also impacted the public sector. Automation can replace levels of human supervision and control in the public sector as well as the private sector. Information about public sector organizations is readily available and easily transferred and can overwhelm public sector managers. Advances in information technology also represents new ways to work that depart from the traditional close physical proximity of the office model.

Finally, even globalization has an impact on public sector organizations. Though most public sector organizations will not be offering goods or services on the global market, this breakdown of geographical barriers has implications. This could be in the form of developing certain competencies to address the effects of globalization on the citizenry. These could include legal perspectives, privacy concerns, security of information, taxation of transactions, regulation of internet transactions and consumer protection. For the public sector this could be a double edge sword, as thinking about how to discharge their responsibilities regarding new ways of doing business leads to changes in thinking on how best to organize to meet those challenges.

In sum, public sector organizational philosophy is not immune from environmental changes. Involving employees in more of the decision-making, while still honoring democratic principles, may lead to some improvement in effectiveness for public sector organizations. It may prove to be a link worth investigating.

Another criticism of Lawler's model comes from a humanistic point of view. Lawler's High Involvement model exhibits some similarities with the machine metaphor of traditional organizations in that both take a utilitarian approach to retaining its employees. Under both designs, as long as you are useful to the organization you will be retained, if not you will be cast off and replaced by individuals who are useful. Early organization thought was influenced heavily by scientific management, which reduced jobs down to discrete steps that were spelled out and controlled by management. Workers did the working while managers did the thinking. Workers were treated as replaceable parts in a machine. Parts that could easily be replaced as technology or work processes changes, as long as the "replacement parts" (i.e. new workers) were provided with the proper instructions. In the high involvement approach, as discussed above, Lawler argues that workers should be offered employability, but not life time employment. Lawler charges that individuals should take more responsibility for managing their career. (Lawler 1996b, p. 270) Since organizations in the information rich, competitive global economy are constantly searching for new opportunities, a given skill set may or may not be needed in a given venture. In other words, as long as you are needed, you have a job, but once this particular venture is over, if the company doesn't find another one that fits your skill set, your services are no longer needed. This is the reason Lawler advocates individual's acquiring a larger inventory of skill sets, to

maximize their usefulness to the organization and to increase their viability in the employment market. Under Lawler's model of high involvement organizations, it is difficult to envision employees developing any level of commitment to the organization. Organizational commitment has different levels, from simple identification with the organization (Dutton, Dukerich, and Harqual 1994, p. 239) to the deeper levels where members go above and beyond their expected duties (Brockner, Tyler, and Cooper-Schneider 1992, p. 244). Lawler is largely silent on the issue of commitment and how it relates to organizational effectiveness.

Despite the above criticisms of Lawler's work on high involvement organizations, it can serve as the basis for additional research. The next section will describe how Lawler's work was used to develop a conceptual model that served as the basis for formulating the research hypotheses. Also included is a high level overview of the research methodology used to test those hypotheses.

Overview of Present Study

This section will present a brief overview of this research effort. The first section will present the conceptual model used to the guide the project. The second section will then discuss the research hypotheses developed from the conceptual model. The final section will present a high level overview of the methodology utilized.

As indicated earlier, Lawler repeatedly argues that the basic premise of high involvement organizations is to make sure that four key elements of participation, namely power, rewards, information, and knowledge, are spread out to as many people on as many organizational levels as possible. As pointed out above, one of the criticisms of Lawler's work is that he does not directly address how commitment fits into the high involvement organization. Lawler's views on the nature of contemporary organizations, which look for a series of short term opportunities that may require the shedding of employees who do not have relevant skills for a particular engagement, poses an interesting question. Figure 1.1 presents a conceptual model that builds upon Lawler's elements of participation and incorporates organizational commitment.

Figure 1. 1 – Conceptual Model
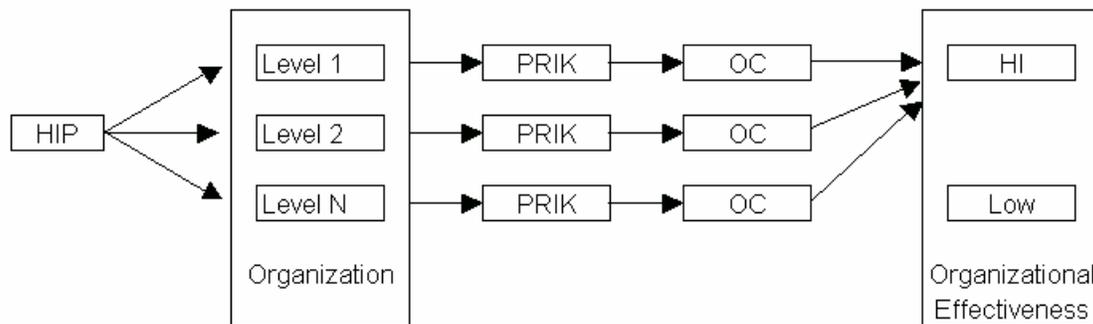
HIP = High involvement practices
PRIK = Power, Rewards, Information, Knowledge
OC = Organizational commitment

Starting on the left side of Figure 1.1, High Involvement Practices (HIP) are applied to all levels of the organization. As a result of these practices, employees at all levels of the organization feel they have power (P) to make decisions and feel they are

provided with enough information (I) and knowledge (K) to make appropriate decisions.

They also feel that they adequately rewarded (R) for their efforts. As a result of being

involved in the decisions affecting their work environment, employees develop a sense of

commitment to the organization (OC). This combination of involvement and

commitment leads to superior work efforts and leads to high levels of organizational

effectiveness. This conceptual model provides a framework from which several testable

hypotheses can be developed. For the purposes of this research project, three hypotheses

have been identified for testing. The next section will discuss these hypotheses and how

they relate back to the conceptual model.

Research Hypotheses

The first area of inquiry is represented by the shaded area in Figure 1.2, which is a

reproduction of the conceptual model presented in the previous section. This area

addresses the relationship between high involvement practices and employee perceptions

of power, rewards, information and knowledge. According to Lawler, the key ingredient

Figure 1. 2 - Conceptual Model; Hypothesis 1
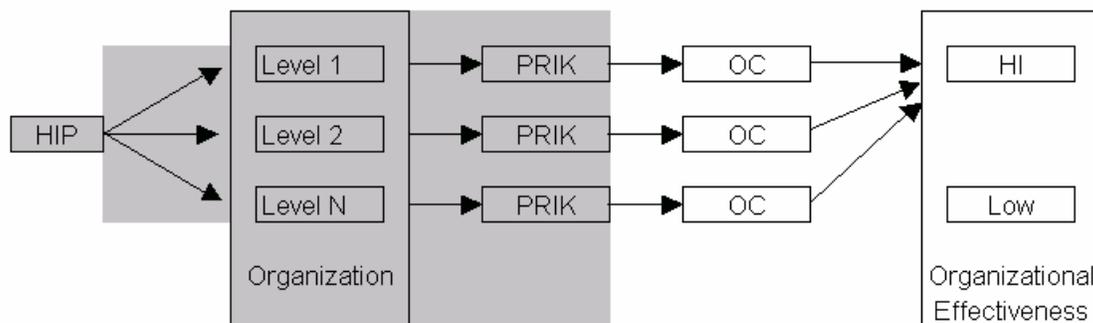
of involvement management is to ensure that these elements are spread throughout the organization. A logical question arises, do greater numbers of involvement management practices lead to greater employee feelings regarding power, rewards, information and knowledge? The first hypothesis will help answer this question and can be stated as:

> Hypothesis 1 - Organizations with a greater number of involvement practices will have employees with higher perceptions of power, rewards, information and knowledge in all organizational units.

The first hypothesis deals with the relationship between the number of high involvement practices and employee perceptions of the elements of involvement, specifically power, rewards, information and knowledge. A second research question builds upon the first by investigating the relationship between the elements of involvement and organizational commitment.

Figure 1. 3 - Conceptual Model; Hypothesis 2
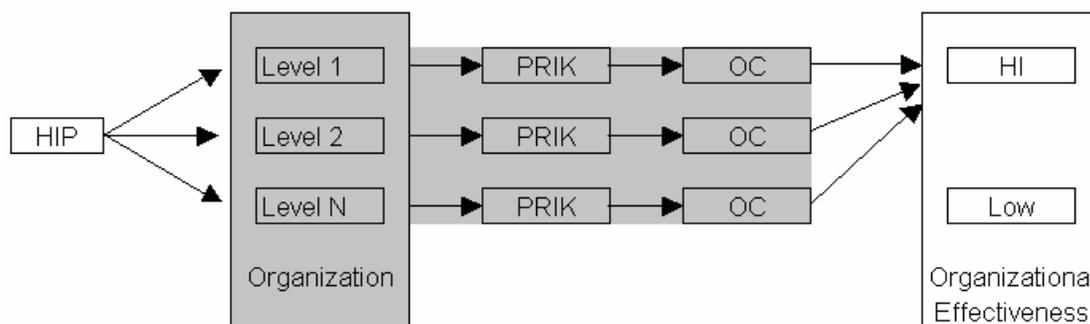
The shaded portion of Figure 1.3 represents the part of the conceptual model addressed by hypothesis two. Since Lawler does not explicitly address organizational

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commitment, the contribution of this research project is the addition of this component to the high involvement conceptual model. A question arises regarding the effect of employee perceptions of power, rewards, information and knowledge on organizational commitment. If high levels of perceptions regarding these elements are found through-out the organization, would this translate into higher levels of organizational commitment? Hypothesis two is designed to address this question and is stated as follows:

> Hypothesis 2 – Organizations whose employees have higher perceptual levels of power, rewards, information and knowledge will have higher levels of organizational commitment.

So far, hypothesis one addresses the link between the number of high involvement practices and employee perceptions of power, rewards, information, and knowledge. Hypothesis two addresses the relationship between employee perceptions of the elements of involvement and organizational commitment. Hypothesis three investigates the relationship between the elements of involvement, organizational commitment, and organizational effectiveness. The shaded area of Figure 1.4 highlights the relationship

Figure 1. 4 - Conceptual Model; Hypothesis 3
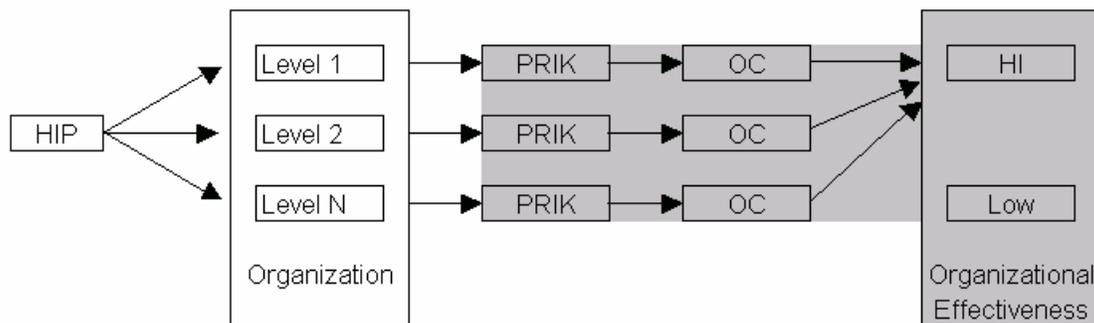
tested by hypothesis three. Lawler argues that the elements of involvement, power, rewards, information, and knowledge, if spread throughout the organization, will lead to higher levels of effectiveness. This research project argues that perceptions of involvement lead to organizational commitment and that this is what motivates employees to work at a high level and produce results for the organization. This can be stated as follows:

> Hypothesis 3 – Organizations with higher perceived levels of involvement and organizational commitment in all organizational units will have higher levels of effectiveness.

This section presented the three hypotheses that are examined in this research project and how they relate to the conceptual model. The next section presents a general overview of the study's methodology and discusses how the project was designed to collect the data needed to evaluate the hypotheses and from where this data was drawn.

Overview of Study Methodology

The purpose of this study is to examine the relationship between involvement management practices, organizational commitment, and organizational effectiveness. In order to test the hypotheses above, three kinds of comparisons had to be made. One comparison was between employees from different organizations regarding their perceptions on the number of involvement management practices and on various components of involvement (i.e. power, rewards, information, and knowledge.) The second comparison was made between employee perceptions of involvement and employee perceptions of organizational commitment. The third comparison was made

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between employee perceptions of involvement and organizational commitment with organizational level performance indicators.

In order to facilitate the comparisons, organizations from a similar contextual background were needed. The researcher contacted a state higher education agency from the Northeastern United States and requested its participation. The Agency has oversight responsibility for more than a dozen state-owned universities. The names of the Agency and the individual universities are withheld at the request of the Agency. Due to resource and other constraints, it was determined that only four universities could participate in the research project. Initially, four universities that were closest in size (in terms of student enrollment) were contacted. Some of these universities declined to participate, so the search expanded to the next closest in terms of size. Eventually four universities agreed. Necessary approvals were obtained from Agency officials, university officers, various union leaders and the Pennsylvania State University Office of Regulatory Compliance.

This research project uses two methods for data collection. Information on employee perceptions regarding power, rewards, information, knowledge and organizational commitment was collected through a survey instrument delivered via campus mail to randomly selected employees. Data on employee perceptions of involvement practices were also obtained from the survey instrument, but only from management employees. Data on organizational performance were collected from Agency records.

Data analysis consisted of statistical techniques and some graphical analysis. First, factor analysis was used on the survey questions to gauge the reliability of the instrument. Second, since hypothesis two is a predictive relationship between

organizational commitment and the components of involvement, regression analysis was used to evaluate the statement. In order to provide a more accurate regression, the factor analysis was used to produce the variables for regression analysis instead of relying on the raw survey responses. Analyses related to hypotheses one and three are exploratory in nature, due to having only four observations. Survey scores are standardized and then charted by university to visually examine how the variables related to each other.

This section provided a brief overview of the study's methodology, discussing the kind of data that were collected, how the data were collected, from where the data were collected, and what kinds of analytical techniques were utilized. The next section discusses the value of the study and provides some justifications for using a public higher education setting.

Value and Relevance of the Study

In the previous section, it was stated that this project conducted research on four public institutions of higher education. The primary value of research derived from this setting is in the application of the High Involvement model in a public sector setting. As stated above, a criticism of Lawler's work was that it focuses exclusively on the private sector. Research in the higher education arena is justified because the same three forces Lawler identified as rendering traditional organizing principles ineffective in the business sector are also impacting public sector organizations. Lawler identified the three forces of 1) intense competition, 2) the permeation of information technology, and 3) globalization of the world economy. Each of these presents an organizing challenge not only for private sector companies, but for universities in the public sector as well.

Public sector universities are in competitive situations. They compete among themselves, and in some cases with other organizations, for a share of the limited resources of students, faculty, research dollars, and governmental funding for operations. This results in pressures to provide high quality educational and research programs, while offering competitive salaries and benefits to employees, yet controlling costs to attract students and political support for public funding. Given the spiraling costs of tuition which generally outstrips the average rate of inflation, universities are under intense pressure to change. One body, the National Commission on Accountability in Higher Education, recently issued a report titled, *Accountability for Better Results*.   This commission was formed by the State Higher Education Executive Officers (SHEEO), whose mission is to assist in "developing and sustaining excellent systems of higher education." (National Commission on Accountability in Higher Education 2005, cover page) In that document, the Commission argues that the preeminence of the United States higher education system is under challenge. (National Commission on Accountability in Higher Education 2005, p. 6) The Commission points out that competition from foreign countries such as China and India, low graduation rates, soaring costs, falling levels of aid, and universal access to higher education are the competitive pressures facing U.S. colleges and universities. (National Commission on Accountability in Higher Education 2005, p. 5) The Commission, consisting of past and present business leaders, politicians, university presidents, and faculty members, claims that in order to succeed in the global economy and maintain our quality of life, universities must be held accountable for results. (National Commission on Accountability in Higher Education 2005, p. 5)   The Commission calls for a fresh approach to accountability, one

where it is "a democratic process through which shared goals are explicitly established, progress is measured, and work to improve performance is motivated and guided." (National Commission on Accountability in Higher Education 2005, p. 7)

As further evidence of the scrutiny higher education is under, another national commission on higher education, this time assembled by U.S. Education Secretary Margaret Spellings, started its work around the time the SHEEO Commission issued its final report. This new commission is charged with exploring "such issues as student access, college prices, and how well the higher education system is 'preparing our students to compete in the new global economy.'" (Lederman September 20, 2005) The committee, which is comprised of current and former politicians, business executives, college presidents, researchers, faculty and experts on minority students has decided to focus on the four subject areas of accessibility, affordability, accountability, and quality. (Lederman October 18, 2005) Preliminary reports on the early stages of the committee's work indicates there is a wide variety of opinions on the Committee as to how to best proceed, with each member's opinion reflecting their own experiences and background. (Lederman October 18, 2005)

The two national commissions above underscore the challenges faced by higher education from competitive pressures and from finding its appropriate place in the globalized economy. The result is intense pressure on colleges and universities to look at the way they conduct their operations and develop ways to improve them. This is similar to what private sector organizations must do in order to survive in their globally competitive environments.

Competition and globalization account for two of the three forces Lawler identified as driving changes in approaches to organizing. The other force, the proliferation of information technology, also impacts higher education. As noted above, Lawler stated that automated information flows can replace human controls and supervision. This can happen in private sector organizations as well as public sector ones. Another aspect of information technology that is unique to higher education, and may have implications on organizing philosophy, is that it is an alternative medium for delivering instruction. With the advent of distance learning, colleges and universities are under even more competitive pressures, as information technology breaks down geographic boundaries and allows instruction to be offered to anyone with time, money, and an internet connection. This new model of service delivery could have implications for organizing in terms of faculty staffing and of organizing an effective support infrastructure.

To summarize, public sector organizations are not immune from competitive pressures and changes in information technology. Given the fact that many public sector organizations, especially institutions of higher education, are under intense pressure to improve operations, it is a worthwhile endeavor to investigate the link between involvement practices and organizational effectiveness.

Additional value of this study lies in the application of the model in a higher education setting, which has a rather unique managerial approach. Lawler states that high involvement management requires a radical re-working of traditionally designed organizations, which tend to have power, rewards, information, and knowledge concentrated at higher levels. (Galbraith and Lawler 1993, pp. 298-299)   Institutions of

higher education are traditionally managed in a more collegial and democratic manner then most private sector organizations. (Koch 2003, p. 330; Hartley 2003, p. 924; Hamilton 2002, p. 21) In short, higher education institutions subscribe to management techniques that can be described as being more participative than the private sector. Applying the involvement-effectiveness model in this setting may provide evidence to validate the premise that power, rewards, information and knowledge are spread throughout the various levels of a participative organization.

Further value from this study comes in the from of adding organizational commitment to the High Involvement model. Finding out how organizational commitment fits into an involvement management situation may be especially relevant to the public sector. According to Lawler's vision articulated above, leaders of today's business organization are forced by competitive pressures to be constantly on the lookout for opportunities in which to engage. These opportunities may not last long, since customer preferences change at a very quick pace. Lawler advocates building organizational flexibility to adapt rapidly from one opportunity to another. Since these opportunities may change in terms of employee skill sets needed, Lawler calls for employees to "self-manage" their careers to ensure they have an inventory of marketable skills so they are "employable." If a particular employee's skill sets are not needed for a particular venture, they will have to be able to secure a position elsewhere. This situation is not conducive to developing commitment to an organization, especially to one which routinely sheds employees if they do not contribute to the current endeavor undertaken. The role of organizational commitment may be more important in a public sector setting, especially since there may be limits on how far employees can be involved. For example,

reward systems may be more constrained than in the private sector. Rewards may be spelled out by collective bargaining agreements. Other reward vehicles such as bonuses, stock options, profit sharing and so on are not available. As an additional limit to involvement, public sector organizations do not have the entrepreneurial freedom that private sector companies have to search for new and different opportunities. Public sector organizations are often established by legislative mandate or executive proclamation to achieve a specific purpose. Unlike private sector organizations, they cannot shop around for profitable ventures. But, like the private sector, public sector organizations are also interested in effective operations and in utilizing the full potential of each employee. This research project will help shed some light on the importance of organizational commitment and involvement management to organizational effectiveness.

In summation, the three forces Lawler identified as changing organization design philosophy in the private sector, namely intense competition, globalization and the proliferation of information technology improvements, affect the public sector as well. This research project provides value in three ways. First, value is provided by applying Lawler's High Involvement model to a public sector setting. Second, value is provided by verifying the patterns of power, rewards, information and knowledge in a setting with organizations that are traditionally more participative in their approaches to management. And third, value is provided by supplying information regarding the role of organizational commitment in the involvement model as applied in a public sector setting.

Structure of the Dissertation

The purpose of this dissertation is to test some of the major assertions underlying Lawler's model and apply them in a public higher education setting. Chapter Two will review the literature on employee participation, empowerment, and involvement, which will then culminate with an extensive discussion of Lawler's model of high involvement. This chapter will also review literature on organizational commitment and on the shared governance environment of higher education. Chapter Three will discuss the research methodology and data collection techniques employed. Chapter Four will cover the findings revealed by data analysis. Chapter Five will present conclusions and suggested avenues of future research.

CHAPTER 2 – LITERATURE REVIEW

Before a review of the participation literature takes place, a summarization of the basic tenets of the bureaucratic-mechanistic form of organizing is in order. This form of organizing has had great success in the past, but as work processes evolve and as larger forces in society change, it may not be the most optimal form for all occasions. An understanding of the theoretical underpinnings of bureaucratic-mechanistic organizations will lead into a discussion of its weaknesses and limitations. This will be followed by a review of the literature on participative strategies, which were developed to address the shortcomings of traditional methods of organizing.

The Lasting Influence of Early Organizational Thought

Early attempts at organizing were based on the machine metaphor, which treated the organization as a social mechanism created to achieve a specific purpose. (Morgan 1986, pp. 22-23)   The decision on what purpose to achieve and how to structure the organization was reserved for management. During the early part of the 20th century, a few core management concepts formed the basis of what was considered to be components of the optimal organizational design. These concepts included, the division

of work, the establishment of hierarchical control structures, and management control over all decision-making. These beliefs had originated from the writings of some very influential authors such as Frederick Taylor, Luther Gulick, Henri Fayol, and Max Weber. Organizational design thought was, and in fact still is, deeply influenced by these structural beliefs. A more detailed discussion of each of these concepts will follow.

Organizing Concept: Division of Work

The concept of the division of work as an organizing guideline was based on efficiency. Economies of scale are achieved when a process is broken down into component parts and each part is assigned to an individual for completion. Gains from specialization are obtained on two fronts. First, time is saved when a person does not have to transition from one step to the next, and second, from the increased skill and precision that comes when a task is performed repetitively.   The results are outputs with lower costs and quicker production times. This economically simple concept, also referred to as specialization, has served as the basis of organizing since the early 1900s. Task specialization was a key component of Frederick Taylor's scientific management.

Taylor wrote that, under ordinary circumstances, workmen thought they knew their job better than anyone in management and should be left alone to handle the details. (Taylor 1967, p. 63)   Under this scenario, where workers determined how work was done and at what rate, Taylor claimed the result was systematic soldiering. (1967, p. 23) Taylor defined this situation as workers deliberately and covertly trying to slow the rate of work and still convince the employer that they are working as fast as possible. (Taylor 1967, p. 21) Taylor took exception to that idea and stated that "every single act of every

workman can be reduced to a science." (Taylor 1967, p. 64)   The central notion of

Taylor's philosophy was that "rules, laws and formulae… replace the judgment of the

individual workman." (Taylor 1967, p. 37)   Taylor felt that any activity undertaken by

any organization could be broken down into discrete steps.   The responsibility for

developing this science rested solely with management. Managers assume the burden of

"gathering together all of the traditional knowledge which in the past has been possessed

by the workmen and then of classifying, tabulating, and reducing this knowledge to rules,

laws, and formulae which are immensely helpful to the workmen in doing their daily

work." (Taylor 1967, p. 36)   Taylor felt management was best suited for developing this

because they were educated, which has given them the "habit of generalizing and

everywhere looking for laws." (Taylor 1967, p. 103)   Once a science of the work was

developed by management, efficiencies would be achieved. This would benefit the

workers through higher wages and benefit management through lower costs.

Taylor was not the only author who advocated the necessity of specialization as a

pillar of organization. Luther Gulick stated that "work division is the foundation of

organization; indeed, the reason for organization." (1987, p. 79)   Gulick viewed the

division of work as a one of the "bootstraps by which mankind lifts itself in the process

of civilization." (Gulick 1987, p. 80)   Specialization was a natural by product of an

increasingly complex work place:

> As each field of knowledge and work is advanced,
> constituting a continually larger and more complicated
> nexus of related principles, practices and skills, any
> individual will be less and less able to encompass it and
> maintain intimate knowledge and facility over the entire
> area, and there will thus arise a more minute specialization
> because knowledge and skill advance while man stands still.
> (Gulick 1987, p. 80)

Taylor viewed any activity as being capable of being broken down into discrete, measurable steps for efficiency's sake. Gulick viewed specialization as a necessity in an increasingly complex society, where knowledge of work processes were expanding beyond the physical abilities of one person to master.   Specialization was limited by three factors. (Gulick 1987, p. 80) First, a step in the work process should occupy the full-time attention of one person. Second the work division cannot violate any organic considerations (his example of how it would be more efficient for half of a cow to be in the field grazing while the other half is in the barn being milked is one example) or tear apart a "series of intimately and intricately related activities." (Gulick 1987, p. 81) Most importantly, work division is limited by technology and custom at a given point in time. (Gulick 1987, p. 81)   In this last limitation, Gulick recognized that division of work was not a static science waiting to be discovered, but rather a process that continually needed to be re-examined as both society and technology changed.

Specialization is also a key component of bureaucratic organizations as described by Max Weber. He wrote that "the proper soil for bureaucratization of an administration has always been the specific developments of administrative tasks." (Gerth and Mills 1958, p. 209)   Bureaucracy itself "rests upon the expert training, a functional specialization of work, and an attitude set for habitual and virtuoso-like mastery of single yet methodically integrated functions." (Gerth and Mills 1958, p. 229)   One of the advantages of the bureaucratic model is its machine like nature. Weber wrote that "the fully developed bureaucratic mechanism compares with other organizations exactly as does the machine with non-mechanical modes of production." (Gerth and Mills 1958, p. 214)   The efficiency of the bureaucratic model is obtained by "functionaries who have

specialized training and who by constant practice learn more and more." (Gerth and Mills 1958, p. 215)

Henri Fayol also wrote of the importance of the division of work. Fayol viewed specialization as part of the natural evolution in light of complexity, whether it is biological organisms or socially constructed organizations. (Fayol 1949, p. 20) As work processes grow more complex, specialization becomes necessary as the ability to master all aspects of the process outstrips the physical capacity of one person to master. Of specialization, Fayol wrote that the "division of work permits reduction in the number of objects to which attention and effort must be directed and has been recognized as the best means of making use of individuals and groups of people." (Fayol 1949, p. 20)

In summation, the division of work became an early-to-mid 20th century core organizing concept not only because of gains in efficiency, but because it was necessary in light of increasingly complex work processes. As the knowledge of work processes expanded beyond the ability of a single person to master, work had to be broken down into smaller units. Division of work is not a static decision, but continually has to be re-assessed as technology and society changes. In terms of organization theory, the division of work had serious implications. The division of work created many different parts of a process that needed to be coordinated. For managers, this coordination was achieved through hierarchical control.

Organizing Concept: Control through Hierarchy

One of the consequences of specialization was the need to make sure all the different parts were working towards the same goal. Gulick wrote, "if subdivision of

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work is inescapable, coordination becomes mandatory." (1987, p. 82)   Early

organization theorists advocated control through hierarchies.   These hierarchies allowed

managers to make sure all the work units adhered to a central purpose through structures

based on close supervision of employees.

Frederick Taylor's scientific management philosophy was built on four principles

that were predicated on hierarchical supervision. These four principles are:

1. The development of a science for each element of work
2. The scientific selection and training of workers
3. Ensuring workers do the work as prescribed
4. Dividing responsibility between workers and management,
   where managers do the planning and workers perform the work.
   (Taylor 1967, pp. 36-37)

Implicit in these principles is the need for organizational structures that have a clear

superior-subordinate relationship between manager and worker. Taylor's focus on the

separation of work planning from work execution created a new function in

organizations, planning. A planner would be needed to develop and maintain the "work

science" while issuing daily orders for the workers to follow.

Gulick wrote that the co-ordination of the work of many different specialists is

accomplished through a system of authority. (1987, p. 83)   The central concern of

organization theory was to "enable the director to co-ordinate and energize all of the sub-

divisions of work so that the major objective may be achieved efficiently." (Gulick 1987,

p. 83) In establishing this system of authority, Gulick advocated the use of three design

parameters; span of control, unity of command, and homogeneity of work units.

Span of control refers to a human limitation, where "the mind and will of man can

span but a limited number of immediate managerial contacts." (Gulick 1987, p. 83)   In

other words, there is a limit to the number of employees a person can directly supervise.

Unity of command refers to a situation where one person has one and only one supervisor

from whom he or she receives orders. (Gulick 1987, p. 85) A person answering to more

than one supervisor will be confused, inefficient, and irresponsible. (Gulick 1987, p. 85)

Homogeneity of work units refers to grouping similar work processes together, and

providing proper technical supervision, in order to avoid friction and inefficiency within

work units. (Gulick 1987, p. 85) For example, it would be unwise to put an economic

development unit in the same work group as an environmental protection unit. They have

contradictory interests and will not work well together.

Fayol wrote that organizations must be set up to achieve several managerial

duties, among them are, the preparation and execution of a plan, the establishment of a

single energetic guiding authority, defining duties clearly, ensuring that individual

interests are subordinated to the general interests, and the control, coordination and

harmonization of all the parts. (Fayol 1949, pp. 53-54) As with Gulick, Fayol advocates

the accomplishment of these managerial duties through hierarchical organizational

structures. According to Fayol, organizations should be built on the principles of unity

of command and unity of direction. Unity of command is similar to Gulick's

conceptualization, where one person answers to one supervisor only. If this isn't

followed, then authority is undermined, discipline is in jeopardy, order disturbed and

stability threatened. (Fayol 1949, p. 24) Unity of direction is described as "one head and

one plan for a group of activities having the same objectives," which is a necessary

condition for unity of action and focusing of effort. (Fayol 1949, p. 25) Fayol also wrote

of the importance of the scalar chain, which is the chain of superiors ranging from the

"ultimate authority to the lowest ranks." (1949, p. 34) This was an important part of subordinating individual interests to the general interest, which was accomplished through constant supervision. (Fayol 1949, p. 26)

Weber's theory of bureaucracy vested organizational control in both structure and rules. (Gerth and Mills 1958, p. 196-197) The hierarchical structure of the organization, combined with written rules and regulations, was meant to constrain the behavior of organizational members and subject them to review by superiors in the hierarchy. Weber wrote that the bureaucratic form of organization, with its emphasis on precision, speed, lack of ambiguity, unity and subordination, resulted in more efficient administration. (Gerth and Mills 1958, p. 214) He recognized the limitations of this form of organization (Morgan 1986, p. 25) but nonetheless it accomplishes control in the organization through strict delineation of behavior, which is ultimately back up by coercive means. (Gerth and Mills 1958, p. 196)

In summary, some common organizing principles can be distilled from these influential authors' writings. The first principle is the division of work, which creates a situation where there are many relatively independent parts working in isolation. In order to insure that all the isolated parts are working towards a common purpose, workers are provided with explicit orders to follow and are then closely supervised to ensure those orders are followed. Furthermore, the supervisors' authority flows down from top management through a hierarchy. Given the concepts of the unity of command and span of control, the hierarchy was constructed so each person has only one supervisor, and each supervisor has a limited number of people to manage. The result of this line of thinking about organizations is a structure that resembles a tall pyramid. The leader of

the organization sits at the top of the organization. The levels below represent

supervisors to whom authority was delegated.   Their job is to ensure all the specialized

work units are working towards a common goal. The hierarchy contains many levels,

depending on how many steps work processes are divided and on how many people are

employed by the organization.

Lasting Effect: Management Control of Decisions

One of the lasting effects of early organization thought was the vesting of all

organizational decision-making with management. This was restricted not just to

structural arrangements, but to nearly every decision that needed to be made in the course

of carrying out the organization's objective. Workers were generally not consulted on

any of the organizing decisions, from deciding how work was divided into tasks to how

the reporting structure was established. In keeping with the machine metaphor, workers

were viewed as replaceable parts of the machine.

Weber wrote that "in the great majority of cases, he (the bureaucrat) is only a

single cog in an ever-moving mechanism which prescribes to him an essentially fixed

route of march." (Gerth and Mills 1958, p. 228) Furthermore, a bureaucratic

organization's impersonal character "means that the mechanism… is easily made to work

for anybody who knows how to gain control over it." (Gerth and Mills 1958, p. 228)

Taylor paid lip service to the participation from employees when responding to

charges that scientific management treats workers as automatons. He wrote that "every

encouragement, however, should be given him [the worker] to suggest improvements,

both in methods and in implements." (Taylor 1967, p. 128)   To his credit, Taylor did

advocate rewarding the person who suggested the innovation (1967, p. 128) but he clearly stated that implementing scientific management is a management responsibility. (1967, p. 103) Taylor also wrote that one of the duties of managers is to "heartily cooperate" with the workers to insure all of the work is done in accordance with the scientifically developed steps. (1967, p. 36) But Taylor also said that "enforcing this cooperation rests with the management alone." (1967, p. 83)

Fayol identified six groups of activities which any industrial undertaking can be divided. These activities are production, commercial (buying/selling), financing, property protection, accounting, and managerial. (1949, p. 3) The first five were considered to be more narrow in scope and were more or less seen as self-explanatory. Managerial activities were viewed as the group whose primary purpose is to draw up broad plans of operation, assembling the personnel to execute the plan, and then to co-ordinate and harmonize effort and activity. (1949, p. 5) Fayol wrote that management responsibilities include, to forecast and plan, to organize, to command, to co-ordinate and to control. (1949, p. 6)   Fayol also wrote that these responsibilities are not restricted to "the head or senior members" of the organization, but are spread throughout the entity. (1949, p. 6)   These duties are allocated through the hierarchy to lower level managers, where each is in charge of and responsible for his or her particular unit. (Fayol 1949, p. 97)

Gulick, who was influenced by Fayol's writings, clearly assigned decision-making responsibility to management. This was evidenced by his acronym POSDCORB, which was the answer to the question of what a chief executive does. POSDCORB stands for planning, organizing, staffing, directing, coordinating, reporting, and

budgeting. (Gulick 1987, pp. 88-89) Realizing that the executive may not be physically capable of performing all these tasks in a large and complex organization, Gulick wrote that the subdivisions of the executive should be established. (Gulick 1987, p. 89) The decision-making represented by POSDCORB encompasses nearly every decision to be made in the organization. The solicitation of employee input on any of these areas is not mentioned.

In summation, early organization thought relied on management to make decisions regarding structural arrangements, work processes, the selection and retainage of workers, budgeting resources, and accountability mechanisms. Non-management members were seldom asked for their input. In an effort to control the organization and make sure all the parts were working towards the same goal, hierarchies were established to closely supervise employee activities. This precedent dominated organization thought for many decades. The principles outlined by Taylor, Weber, Gulick and Fayol formed the basis of organizational thought for much of the 20th century. The fact that this form of organization has endured for so long is a testament to its accomplishments. Entities that were influenced by the writings of these authors and have had great success include well known organizations such as the military (i.e. Allied Forces in WWII), automobile makers (i.e. Ford, General Motors), and steel manufacturers (i.e. US Steel, Bethlehem Steel). These successful organizations were considered to have the best structure and many other organizations in different fields of endeavor imitated them in the hopes that success would also follow. (Lawler 1986, p. 7) Thus a diverse array of organizations began to adopt design elements such as hierarchical structures organized by functions, extensive use of job descriptions, policies, regulations and procedures plus cadres of

professional managers to run the organizations. Line workers were viewed as replaceable

cogs in a machine that was designed by managers. Managers made all the decisions,

garnered most of the rewards, and tightly controlled all information. For some time, this

was seen as the only way to organize. Over a span of many years, the limitations of the

mechanistic-bureaucratic method of organizing became apparent. These criticisms have

roots in notions of effectiveness and humanism.

Criticisms of Traditional Methods of Organization

Though the classical command-and-control basis of organizing had met with

success, it became apparent that it did have negative consequences for the organization

itself and for the people within the organization.   Traditional forms of organizing were

not effective in all situations, and in addition, these forms of organizing acted as a

constraint on human potential.

Effectiveness

The main intentions of organizations designed according to the guidelines

espoused by Taylor, Weber, Fayol and Gulick were to increase administrative efficiency

and organizational effectiveness through the coordination of specialized work units by

close supervision and the establishment of specific rules to follow. When these types of

organizations were studied, scholars discovered "patterns of activities and interactions

that cannot be accounted for by official structure." (Blau and Meyer 1971, p. 46)   Mayo

concluded that "our administrative elite has become the addict of a few specialist studies

and has unduly discounted the human and social aspects of industrial organization. The

immediate need is to restore effective human collaboration." (Mayo 1960, p.175)   These authors pointed out the need to understand how the work group played a role in influencing effectiveness. In organizations which have been designed in the traditional mold, examining the behavior of work groups uncovered some dysfunctions that adversely affected the accomplishment of organizational goals. These dysfunctions can be broadly classified as inflexibility, lack of communication and resistance.

From an effectiveness perspective, bureaucratic-mechanistic organizations were increasingly seen as being limited by their own regulations and procedures. Merton discussed the dysfunctions that may arise due to the structural characteristics of bureaucracies. He argued that organizations utilizing hierarchical relationships and operating via prescribed rules and procedures breed a stable set of mutual expectations. (Merton 1952, p. 362)   These expectations are the result of applying the prescribed rules and procedures to various situations, which produces reliable patterns of action and behaviors.   What can result is "primary concern with conformity to rules" which "interferes with achievement of the purpose of the organization." (Merton 1952, p. 366) This becomes especially apparent when the organization is faced with an environment filled with change. Members of bureaucracies are trained to react in a prescribed fashion to events encountered in their organizational lives. Merton stated that "in general, one adopts measures in keeping with his past training and, under new conditions which are not recognized as significantly different, the very soundness of this training may lead to the adoption of the wrong procedures." (1952, p. 364)   Thus, bureaucratic organizations could be faced with applying the wrong solution to the wrong problem. This situation will inhibit the organization from achieving its goals.

Blau and Meyer also identified rigid behavior as a dysfunction in bureaucratic organizations. They argued that some members, especially when there was a fear of superiors, found security in strict adherence to familiar routines. (Blau and Meyer 1971, pp. 103-104)   This phenomenon they called "ritualistic orientation." It occurs when members "become so preoccupied with meticulous application of detailed rules that they lose sight of the very purpose of their action." (Blau and Meyer 1971, p. 101) As a result of this, members "strongly resist changes in the organization and are incapacitated by new problems that confront them." (Blau and Meyer 1971, p. 103)

Barker (1993) invokes Weber's imagery of the "iron cage" in describing the constraints that develop around organizational members in a bureaucracy. Barker states that "as organizational activity increasingly becomes saturated by bureaucratic rationalization processes, it is increasingly constrained by them." (Barker 1993, p. 410) Bureaucratic-mechanistic organizations were established with the intent of controlling the activities of their members by dictating what actions to take and when to take them. This type of control is so extreme that it actually decreases the organization's ability to react to change in the environment. Narrowly prescribed activities may be appropriate in organizations that have fairly certain and tractable production processes, but these controls are not suited for organizations that have a high degree of uncertainty and complexity in their processes. (Barker 1993, p. 411; Chatman and Jehn 1989, p. 524; Morgan 1986, p. 34) If an organization is faced with a turbulent environment that requires frequent modifications to production and/or service processes, the bureaucratic-mechanistic form is not the optimal structure. The focus on control inhibits essential

organizational attributes that are needed in a volatile environment, attributes such as

flexibility, adaptability and innovation. Morgan (1986) writes that:

> Mechanistic organization discourages initiative, encouraging
> people to obey orders and keep their place rather than to take an
> interest in, challenge, and question what they are doing. (p. 37)

Morgan goes on to state that in a mechanistic-bureaucratic organization, overall

organizational goals may be displaced by personal interests. The strong control emphasis

in traditional organizations tends to cause individuals to focus on satisfying all the

various rules and regulations they must follow. Eventually, they may lose sight of the real

purpose of the organization. Many individuals can relate personal experiences in dealing

with traditional organizations and tell many tales of bureaucrats possessing a mindless

and unquestioning adherence to seemingly nonsensical or contradictory departmental

policies.

The second category of dysfunction found in traditional organizations has to do

with communication, or more specifically, the lack of it. In organizations designed on

traditional hierarchical principles, communication is usually one way, from the top down.

But in some cases, control systems may need to be established that depend upon

information flowing upwards through the hierarchy (to monitor production data for

example.) Under this scenario, there are situations where organizational members may

be motivated to produce invalid information. This is most likely to occur when control

data are subjective or difficult to measure, when standards are arbitrarily set from above

and are unreasonable, when individuals collect the data and then deliver them to their

superiors who use it to administer rewards and/or punishments. (Lawler 1983, pp. 1259-

1265)   In a bureaucratic-mechanistic organization, researchers have shown how work

group norms have influenced behaviors on the job. Taylor pointed out that workers

collaborated to restrict output, in what he called "systematic soldiering." (Taylor 1967,

pp. 21-23.) Mayo's research identified that humans develop a "nonlogical social code

which regulates the relations between persons and their attitudes to one another." (Mayo

1960, p. 116) Organization theory that looks at only an "economic logic of production"

will force the "nonlogical social code" to be developed in opposition to the production

logic, resulting in restriction of output. (Mayo 1960, p. 116) Restriction of output can be

viewed as a type of invalid data production.

Another type of communication dysfunction arises from what Blau and Meyer

call "glorifying myths." These are ideologies that help to create a sense of purpose

among members while strengthening their commitment and loyalty. (Blau and Meyer

1971, p. 51) An example Blau and Meyer referred to was the United States Marine

Corps's ideology that they are the elite armed service branch. Though these glorifying

myths "are what forge human beings into social units having common purposes," they

can "have serious dysfunctions in organizations." (Blau and Meyer 1971, p. 52) Blau and

Meyer wrote:

> Because ideologies tend to glorify not only the organization
> itself but also the existing arrangements and institutions within
> it and its particular leaders, critical evaluation of organizational
> patterns and practices is discouraged, top executives are insulated
> from criticisms, and needed innovations are not introduced.
> (Blau and Meyer 1971, p. 53)

These myths affect communication processes in the organization. Blau and Meyer used

the term, "pluralistic ignorance," to describe why organizational members may be

hesitant to speak out. Basically, it relates back to group norms. Pluralistic ignorance

occurs when "members of an organization maybe aware of certain problems and

deficiencies, each may think that all others are satisfied with existing arrangements…

[this] prevents the information from becoming official knowledge." (Blau and Meyer

1971, p. 54) Thus the communication flow of important information is hindered by

pluralistic ignorance.

The third category of dysfunction found in organizations designed on classical

principles has to do with the resistance to control efforts. One aspect of this resistance

has to do with the national culture of the United States. Blau and Meyer wrote that "in a

democratic culture, where independence of action and equality of status are highly

valued, detailed rules and close supervision are resented, and resentful employees are

poorly motivated to perform their duties faithfully and energetically." (Blau and Meyer

1971, p. 58) Ouchi and Jaeger also wrote that the ideology of independence in American

society makes it difficult for organizational members to subordinate individual freedom

to any type of central authority. (Ouchi and Jaeger 1978, p. 306.)

Another aspect of resistance to authority has its roots in the nature of

specialization. A basic assumption of traditional hierarchical organizations is that

supervisors are considered to possess more technical knowledge than their subordinates.

(Blau and Meyer 1971, p. 71) As technology advanced and became more complicated,

this assumption was no longer valid. Organizational managers were then "forced to hire

people whose work they do not understand and whose competencies they cannot

evaluate." (Blau and Meyer 1971, p. 71) Thus technical competence emerged as a basis

of authority that competed with hierarchical authority, a situation that traditional

organizational theories did not anticipate. (Blau and Meyer 1971, p. 72) Another

mutation of this type of technical authority is collegial authority, where authority is

exercised by groups of external colleagues as opposed to supervisors within the

organization. (Blau and Meyer 1971, p. 77) Technically based authority arises from

knowledge of a specific, complicated work process. For example, there is extensive

training that goes into becoming a jet mechanic, but at some point in the airline hierarchy,

the mechanics report to a manager with out a mechanical background. It would be

difficult for this manager to supervise, plan and evaluate the work of the jet mechanic. It

would also be difficult for the mechanic to take orders from someone who knows nothing

about the operation and maintenance of jet engines. On the other hand, collegial

authority applies to established professions, where members determine guidelines for

evaluation and even entry into the profession. These would include occupations in arenas

such as medicine, law, and academe. For example, in the higher education arena,

individual faculty members may be part of a hierarchy where, on paper, they report to a

department chair, who reports to a dean, who reports to a provost, who may report to a

president or chancellor. But the individual faculty member's research and teaching

subjects are determined mostly by themselves, which is partially determined by what is

current in their particular field. Traditional organizational thought did not account for

these competing sources of authority, as it was based on the premise of hierarchical

superiors having greater technical knowledge than their subordinates. Changing

technology and increasing complexity represented a fundamental change in organizations

that traditional organizing principles did not address.

In summary, "a fundamental dilemma of bureaucratic administration is that the

very arrangements officially instituted to improve efficiency often have by-products that

impede it." (Blau and Meyer 1971, p. 59) Central authority is established to insure that

better decisions are made, but undermines mid-level managers abilities to assume responsibility; detailed rules and procedures are established to improve performance, but this prevents adaptability and innovation; strict discipline is established to facilitate control of the various work units, but this creates resentment that reduces effort. (Blau and Meyer 1971, p. 59) Criticisms of the traditional form of organizing are not limited to concerns of effectiveness. Other scholars concentrate on the negative impacts that bureaucratic-mechanistic organizations have on their employees. This will be the topic of the next section.

<div align="center">Humanistic</div>

From a humanistic perspective, the traditional bureaucratic–mechanistic organization can have de-humanizing effects on employees, especially at the lower levels of the hierarchy. (Morgan 1986, p. 35) Many writers place the blame on the classical principles of organizing, which were based on wrong assumptions regarding human nature.

McGregor wrote that one of the major tasks of management is to organize human effort in the service of the economic objectives of the enterprise. (1985, p. 3) He further stated that every managerial act rests on "assumptions, generalizations, and hypotheses-that is to say, on theory." (McGregor 1985, p. 6) McGregor's main argument was that classical organizational principles, which provided the intellectual blueprint for constructing bureaucratic-mechanistic organizations, were not based on sound scientific principles:

> Formal theories of organization …. Have had a profound influence
> upon managerial behavior …. Despite the fact they rest primarily on

armchair speculation rather than empirical research, the literature
gives the impression that these classical principles are beyond challenge.
(McGregor 1985, p. 15)

McGregor wrote that classical organizational principles, such as hierarchical structures,

unity of command, task specialization, division of staff and line, span of control, and

equality of responsibility and authority, were derived from inappropriate models, namely

military organizations and the Catholic church. (McGregor 1985, pp. 16-18) Thus

classically designed organizations were based on erroneous assumptions regarding

human nature in a working environment. To illustrate this point, McGregor developed

two classifications to compare and contrast assumptions about human behavior in

organizations. The classical approach to organizing, labeled Theory X, was based on the

following assumptions (McGregor 1985, pp. 33-34):

1. The average person generally disliked work and will try to avoid it
2. Because of the dislike of work, people had to be forced or threatened in order to put forth effort to achieve organizational objectives.
3. The average human prefers to be directed, wishes to avoid responsibility, has little ambition, and wants security.

On the other hand, Theory Y was based upon a different set of assumptions regarding

humans, which has a different consequences for organizing. Theory Y assumptions are

(McGregor 1985, pp. 47-48):

1. The expenditure of physical and mental effort at work is as natural as rest or play
2. Humans will exercise self-direction and self-control in the service of objectives to which they are committed.
3. Commitment to objectives is a function of the rewards associated with their achievement.
4. Under proper conditions, humans will not only accept but seek responsibility
5. The capacity to exercise imagination, ingenuity, and creativity is widely distributed throughout the population
6. The intellectual potentialities of the average human being are only partially utilized.

In organizations based on the assumptions contained in Theory X, the cause of ineffective performance is due to the nature of human resources employed. In Theory Y based organizations, ineffective performance is caused by the methods of organization and control. (McGregor 1985, p. 48)   The central principle of Theory Y based organizations is integration. This principle "demands that both the organization and the individual's needs be recognized." (McGregor 1985, p. 51) McGregor argued that by recognizing the assumptions contained in Theory Y, a whole new range of managerial policies and practices was opened. (McGregor 1985, p. 54)   McGregor wrote that the challenge for managers is to "innovate, to discover new ways of organizing and directing human effort, even though we recognize that the perfect organization . . . is practically out of reach." (McGregor 1985, p. 54)

Argyris also focused on how classically designed organizations underutilized the talents of their human resources. He stressed the need to integrate the individual into the organization, a relationship where "both have to give a little to profit from each other." (Argyris 1990, p. 3)   Argyris wrote that organizations have an initial or intended structure, which is "simply a static picture of the pattern of the units as planned by the creators in order for people to achieve the objectives." (1990, p.35)   When the initial organization is based on traditional organizational principles, such as scientific management, unintended consequences can result. (Argyris 1990, p. 35)   Organizations built on classical ideas such as specialization of work, chain of command, unity of direction and span of control may create "a complex of organizational demands that tend to require individuals to experience dependence and submissiveness and to utilize few of their relatively peripheral abilities." (Argyris 1990, p. 58) Under these circumstances,

characterized by strict managerial controls and directive leadership, employees are not able to experience feelings of psychological success and self-esteem.

Argyris writes that it is natural for humans to want self-esteem, which can be simply defined as valuing one's self. (Argyris 1990, p. 26) In order to increase feelings of self-esteem, Argyris argued that individuals must experience psychological successes. In order to develop feelings of psychological success, people need to be in an environment where they can feel self-responsibility and self-control, commitment, productiveness, and utilization of abilities. (Argyris 1990, p. 27) A traditional bureaucratic-mechanistic organization does not provide such an environment. The result is a gap between individual's needs and the organization's needs. The individual wants the freedom to use his or her talents in performing their job, but the traditionally designed organization wants to strictly control the behavior of its members. This gap widens as you go farther down the chain of command, where the job exerts more control over the individual. (Argyris 1990, p. 41) When employees are unable to experience psychological success at work, they begin to display negative behaviors such as absenteeism, turnover, quota restrictions, slowdowns, trade unions, noninvolvement, and alienation. (Argyris 1990, p. 92) Argyris argues that this incongruence between the individual and the organization is "the basis for a continued challenge which, as it is fulfilled, will tend to help man to enhance his own growth and to develop organizations that will tend to be viable and effective." (Argyris 1990, p. 7)

Likert also recognizes the importance of tapping into the human resources of an organization. This is accomplished by providing members with a "feeling of support and recognition for his importance and worth as a person." (1961, p. 102) He stated that

organizational design principles based on developing supportive relationships provides a

fundamental formula for obtaining the full potential of every working situation. This

principle was defined as:

> The leadership and other processes of the organization must be
> such as to ensure a maximum probability that in all interactions
> and relationships with the organization each member will, in the
> light of his background, values, and expectations, view the
> experience as supportive and one which builds and maintains his
> sense of personal worth and importance. (Likert 1961, pp. 102-103)

In order for an interaction to be classified as supportive, the individual must view it as

contributing to or maintaining his sense of personal worth and importance. (Likert 1961,

p. 103)   In relating supportive relationships to organizational effectiveness, the

individual must also feel that the organization's objectives are of significance and that

their particular task contributes in an indispensable manner to the organization's

achievement of its objectives. (Likert 1961, p. 103)   The key connection between

individuals and organizational effectiveness was the work group.

Likert argued that an organization "will function best when its personnel function

not as individuals but as members of highly effective work groups with high performance

goals." (Likert 1961, p. 104)   Work groups allow individuals to develop their sense of

personal worth and importance:

> The face-to-face groups with whom we spend the bulk of our
> time are … the most important to us … most persons are highly
> motivated to behave in ways consistent with the goals and values
> of their work group in order to obtain recognition, support, security,
> and favorable reactions from this group. (Likert 1961, p. 104)

Likert recognized that organizations based on work groups, like ones designed using

classical principles, has coordination issues. Traditional organizations made sure all the

individuals parts were working toward the same goals through hierarchical supervision and the issuance of strict rules. Likert did not abandon the concept of hierarchical control, but he re-conceptualized it as a hierarchy of groups, connected together by linking pins. Linking pins are individuals who hold overlapping group memberships. (Likert 1961, p. 105) These individuals, combined with group decision-making, play a key role in co-ordination. Likert made it clear that group decision-making was not the same as decisions by committee. In a properly functioning group:

> Every member should have high performance aspirations…
> since these high performance goals should not be imposed on
> employees, there must be a mechanism through which employees
> can help set the high-level goals which the satisfaction of their
> own needs require. (Likert 1967, p. 51)

The important thing is that the "groups press for decisions and action in the best interest of all members." (Likert 1961, p. 110) The greater the loyalty to the group, the greater the probability of the group achieving the goals they set. (Likert 1967, p. 64) When work groups participate in setting their objectives, and have a high degree of group loyalty, control takes place in the form of self-control, as opposed to control via authoritative direction. In the group pattern of organization, decisions are made in "the best interest of all the members" with refusal to "accept solutions which unduly favor a particular member or segment of the group is an important characteristic." (Likert 1967, p. 109) An important component in Likert's conceptualization of a group based organization is communication between the groups, which is channeled through the linking pin role.

Classical organizations "place primary emphasis on control, chain of command, and the downward flow of orders and influence. There is no corresponding emphasis on

adequate and accurate upward communication." (Likert 1961, p. 46)   The linking pin

role is essential to ensuring that each group does not set goals that are not in the best

interest of the overall organization. As a member of the group above them in the

hierarchy, the linking pin role would also participate in group decision-making that

would be in the best interest of that group, while considering the needs of the group

below them. This linking pin role would exist throughout the hierarchy, connecting

groups below to groups above. This role allows the coordination of group objectives.

Interestingly enough, despite Likert's rhetoric regarding the importance of work groups,

he still subscribes to the classical organizational principle that the superior "is

accountable for all decisions, for their execution, and for the results." (Likert 1967, p. 51)

Denhardt, who draws on the work of Linda de Leon, makes the argument that

different organizational structures have different pathologies associated with them.

(Denhardt 1994) She writes that organizations structured as pyramids, such as

bureaucracies, are characterized by hierarchy, formalism, division of labor, and

specialization. (Denhardt 1994, pp. 178-179).   The underlying values associated with this

type of organizational structure can result in unintended negative results such as rigidity,

the circumscription of individual freedom, forcibly induced conformity, and alienation of

organizational members. (Denhardt 1994, pp. 178-179)   Morgan also cites the

dehumanizing effects of bureaucratic-mechanistic organizations. He writes that these

organizations tend to:

> limit rather than mobilize the development of human capacities,
> molding human beings to fit the requirement of mechanical
> organization rather than building the organization around their
> strengths and potentials. Both employees and organizations lose
> from this arrangement. (Morgan 1986, p. 38)

The dehumanizing effects of bureaucratic organizations are not limited to employees, but can affect society as well. The concept of "red tape" has been popularly described as encompassing the behaviors engaged in by members of bureaucratic organizations. Gouldner argued that the "red tape" associated with bureaucratic encounters can be viewed by those outside the bureaucracy as a problem, while those inside the bureaucracy view it as a normal occurrence. (1952, p. 411) Whether one views "red tape" as a problem or as a necessary occurrence depends upon his or her frame of reference. Based on interview data, Gouldner constructed a profile of characteristics that is associated with negative views of bureaucracies. Characteristics of people that may view red tape as problematic include perceptions of bureaucratic actions as unnecessary, inefficient, a violation of privacy, and as a roadblock to receiving an entitlement. (Gouldner 1952, pp. 412-414) In addition, these types of people may also feel powerless, suspicious, and confused. (Gouldner 1952, pp. 414-416.) From an organizational perspective, Gouldner argued that the source of social frustration lies within the bureaucracies themselves. He wrote:

> Social institutions during the last century or so have undergone profound changes partly describable as bureaucratization. The red tape stereotype gives compact but blurred expression to the resentment against the alienation, the impersonalization, and the dull routines that afflict bureaucracy. (Gouldner 1952, p. 418)

The dehumanizing effects of the bureaucratic-mechanistic organization go hand-in-hand with the criticisms relating to effectiveness. To simply describe the situation, people who belong to organizations that constantly tell them what to do, when to do it, never asking for their input and essentially treating them as replaceable parts will not be

very motivated to perform at a high level. In addition, the resulting negative attitudes are apparent to their clients or customers and cause them frustration as well.   This situation may place organizations in a precarious situation where their survival is threatened, simply because their structural design is limiting their effectiveness and alienating their employees and their client base.

This predicament is exacerbated by larger environmental forces affecting work processes. (Lawler 1996b, p. 5-6; Likert 1961, pp. 1-2)   Lawler identifies two environmental trends that are limiting the applicability of traditional organizational structures; changes in the nature of work and changes in the nature of workers. (Lawler 1986, pp. 13-17)

Drivers of Change in Organizational Thought

The limitations inherent in bureaucratic-mechanistic organizations became apparent as larger forces in society evolved. The two primary forces identified by Lawler include changes in the nature of work in general and changes in the nature of the workers themselves. These societal changes resulted in pressure to reshape organizational thought and eventually led to design parameters that contained some degree of participation. The next two sections briefly discuss these societal changes and then leads into a detailed review of the literature on participation

Change in the Nature of Work

The nature of work processes in the United States has always had an influence on organizational design considerations. Work in general can be viewed as going through an

evolutionary process. As work evolved, approaches to organizing had to evolve as well.

Work started as a very labor intensive, individual oriented process. With the rise of

power machinery and automation, technology changed the nature of work, transforming

it from handmade craft industries based in the home to more capital intensive specialized

processes performed by individuals working together in central factory locations. The

rapid development of information technology has, and still is, influencing organization

theory and design. The ability to quickly access and distribute large amounts of

information from almost any location has implications for organizational theory and

design. This evolution of the nature of work will be briefly examined within the

framework of the industrial revolution, which can be segregated into three historical

periods of change.

Before the industrial revolution began, the cottage industry system was the

predominant method of manufacturing and delivering goods into the mid to late 1700s.

(Great American n.d.-a)   Most goods were produced by hand and sold by the owner-

craftsman in his or her home. All decisions regarding production methods, quality

control, costs, and the selling price were determined by the craftsman. (Clark and Hayes

1988, pp. 13-15) The craftsman was also responsible for the supervision of a limited

number of apprentices, who studied under a master craftsman until they were deemed

competent enough to move out on their own. (Donkin 2001, pp. 30-31) This enabled a

particular craft, or set of job skills, to be passed from one generation to the next. Each

craftsman depended on his or her own experience in making decisions regarding their

business.

The nature of work underwent drastic change during the First Industrial Revolution, which started in England in the latter half of the 18th century. (Chandler n.d.; Great American n.d.-b; Leighton 1970, p. 3) The simple hand tools and decentralized nature of the cottage industry system were replaced by machines powered by steam and by the centralized nature of the factory system. The factory system brought all the workers together under one roof, and this required business owners to address issues such as dealing with the dynamic of having a large number of people interacting together under one roof and in dealing with instructing workers on how to properly use power machinery. (Tucker 2005, p. 21; Donkin 2001, pp. 68-69; McKenna 1991, p. 4; Clark and Hay 1988, pp. 13-15) The responsibility for transmission of work knowledge passed from the ones actually doing the work to the factory owner.

The Second Industrial Revolution, which started in the late 19th century, brought with it another evolutionary change in work processes. (Chandler n.d.; Leighton 1970, pp. 3-4) The advent of better transportation systems, the rise of electricity as a source of power, improved communication technologies, and the application of scientific principles to industrial production processes resulted in the creation of very large business organizations.   Since there was now a higher ratio of capital in many of the production processes at the time, operations had to be of sufficient size to take advantage of the economies of scale. (Chandler n.d.) One result was that owners of large businesses had to hire professional managers to help run these huge organizations. (McKenna 1991, p. 4) They were responsible for planning work processes and for providing detailed instructions for workers to follow.

Traditional methods of organizing were developed at this time, when work was relatively simple and oriented towards manufacturing. Taylor developed and tested his theories in the early 1900s using the steel manufacturing industry, during the height of the second industrial revolution. That time period saw the growth of capital intensive industries such as steel, oil, chemicals and electrical. (Chandler n.d.) Work in these types of industries was suitable for dissection into the discrete, clearly identifiable, linear steps that was characteristic of the bureaucratic-mechanistic method of organizing. In general, the nature of work in the first quarter of the 20th century was characterized by standard production processes that could easily be broken down into written procedures which produced easily quantifiable outputs. Organizations embraced Taylor's methods and focused on finding the one best way to manage production and control worker behavior. (Clark and Hayes 1988, pp. 16-17) In efforts to keep down costs and increase output, technology and automation were readily embraced throughout the 1900s (McKenna 1991, p. 5) The result was work processes that became more complicated and complex which meant they were not easily translated into a series of simple linear steps. Complex work processes had an affect on organizations as well. They became larger, with additional layers of management to deal with planning and coordination. (Donkin 2001, p. 153) In regard to organizational theory and design, a majority of managers kept referring back to the bureaucratic-scientific management model. They reasoned that what worked in the past, would work again in the future.

During World War II, there was tremendous pressure on refining production methods in order to produce high volumes of goods for the war effort; goods that were undergoing rapid technological change at the same time. (Clark and Hayes 1988, p. 21)

Through application of Taylor's methods of analysis, organizations made significant

gains in quantity and quality. (Clark and Hayes 1988, p. 22)   After World War II,

because of the contribution of American industries to the war victory, organizations in

the United States were held up as the model for the rest of the world to emulate.

(McKenna 1991, p. 5)

After World War II, as the United States economy gradually shifted from a

manufacturing basis to service provision, the nature of work itself changed again. (Likert

1961, pp. 1-2) It was no longer characterized by a linear string of easily identifiable

steps. Work was becoming more knowledge oriented, often requiring an in depth

understanding of complicated issues. (Lawler 2003, pp. 6-7; Cohen and Mankin 1998, pp.

156-157) Work could be characterized as consisting of a variety of complicated

processes that had to be performed simultaneously. Managers could no longer

realistically plan out the duties of their subordinates through time-and-motion studies,

detailed job descriptions, or departmental regulations and procedures. (Lawler 1986, p.

15) Work processes were becoming abstract, complicated and required more specialized

knowledge than managers could ever possibly master. (Cohen and Mankin 1998, pp. 159-

161)

Starting with the late 1960s and 1970s, some writers described the rapid evolution

of information technology and the expansion of markets beyond geographical borders as

the "third industrial revolution." (Galambos 2005, pp. 5-7; Leighton 1970, p. 4)

Technology now renders geographical location irrelevant in many cases. An organization

can be literally spread across the globe. Information technology impacts organization

theory because it can be used to control employees or to empower them to control themselves. (Cohen and Mankin 1998, p. 158)

In summary, as the nature of work changes, so does the focus of organizing efforts. Under the cottage industry system, work was performed by hand in the craftsman's home. In these small operations, all work process decisions were made by the craftsman. The first industrial revolution spawned the factory system and the use of automation. Work processes were now centralized under one roof, with many workers using power machinery. Initially, organization theory was concerned with designing the most efficient work processes, as evidenced by the work of Taylor, Fayol and Weber. The second industrial revolution gave birth to large scale business operations. These organizations used increasingly complex work processes and utilized automation to the fullest extent possible. Professional managers were utilized to make decisions and to control worker behavior. Organization theory still focused on designing efficient work processes, though the dynamics of human interactions in the work place began to receive attention by organizational scholars such as Argyris, Likert, McGregor, and Mayo.

The third industrial revolution has been driven by advances in information technology. As work becomes less physical and more knowledge based, new challenges arise for organization scholars. The free flow of information has eliminated many geographical boundaries. Workers no longer have to be in the same physical space nor is a large physical plant needed. Work processes are so complex that managers do not have the knowledge to instruct workers on how to do their jobs and in many cases have become a superfluous layer of overhead. In a large part, contemporary organizational

scholars such as Lawler are developing theories on how to deal with the new realities of the third industrial revolution.

The change in work processes from individual oriented home-based crafts to automated physical processes to complex, knowledge based services drove changes in the focus of organizational theory. Changes in organizational theory focus is also affected by changes in the workforce. The next section will discuss this topic.

Change in the Nature of the Workforce

In addition to changes in the nature of work in the United States, Lawler also cites changes in workers themselves as driving new perspectives on organizing. The two factors behind these changes were increases in the level of workers' education and shifting societal attitudes. In the period of 1910 to 1940, high school enrollment and graduation rates in the United States were the highest in the world. (Goldin 1999, p. S66) The period after World War II saw growth in the number of people going to college, fueled by an influx of returning GIs and a robust US economy. People were obtaining better educations and they desired to put their knowledge to use on the job. (Lawler 1986, pp. 16-17; Likert 1961, p. 2)

As social consciousness was evolving in society in general, it also affected work place attitudes. The "social revolution" of the 1960s and 1970s resulted in attitudes where people questioned authority and placed increased emphasis on the values of equity and justice. (Lawler 1986, p. 17) Lawler best summarized the situation by saying "people are becoming less comfortable with a society in which work organizations are autocratic while political and other features of their lives are democratic." (Lawler 1986,

p. 19) Organizations need to recognize the need to attract and retain talented people while establishing the strategies, practices, designs and policies that enable them to work effectively. (Lawler 2003, p. 12)

In summary, the traditional choice of organization, the bureaucratic-mechanistic model was, and in fact still is, very effective in situations where tasks consist of relatively simple processes that can be broken down into identifiable steps. The US economy moved away from these types of processes and became more oriented towards complicated high tech production processes and knowledge-based service provision. This evolution, combined with general societal trends of increasing educational levels and emphasis on social equity and justice, has limited the effectiveness of the traditional way of organizing. As a result of this mismatch between organizational form and task configuration, the accomplishment of organizational goals suffered. Researchers turned their attention to alternate ways of organizing as an answer to this dilemma. One solution proposed increasing the level of participation of organizational members in various aspects of operations, since they now possessed the expertise that managers lacked. The next section of this research project will more thoroughly discuss participation and the related concepts of empowerment and involvement.

<center>Potential Solution: Participation</center>

Given the complexity of work in general, and the rise in sophistication levels of workers, some managers were faced with a dilemma. They no longer had the knowledge to direct and control organizational behavior through carefully prescribed procedures. At the same time, workers were faced with a dilemma. They no longer were satisfied with a

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job that was reduced to a set of procedures and a mere paycheck. They longed to use the skills and education they had acquired. A logical course of action is to bridge this gap between managers and workers. The bridge offered by some organization scholars is based on the notion of tapping into the wealth of knowledge and experience possessed by the workers. (Likert 1961, p. 100) The general label attached to this notion is participation, but a review of the literature has revealed that there is a great deal of confusion regarding this concept.

<center>*Conceptual Confusion: What is Participation?*</center>

In a journal article, Glew and his associates assert that "there is no generally accepted definition, nomological network of antecedents and consequences, standard research framework, or set of guidelines regarding participation." (Glew, O'Leary-Kelly, Griffin, and Van Fleet 1995, p. 396) They go on to state that participation research is becoming "even more nebulous due to its undetermined relationships with newly emerging constructs and organizational practices." (Glew et al., 1995, p. 396) Glew et al., discuss the problem of construct validity in relation to participation. They pose the question, "What organizational phenomena, dimension, or event should be labeled participation?" They identify segments of the literature that deal with decision-making, leadership style, and employee ownership and compensation plans, and conclude that participation's meaning is context driven. (Glew et al., 1995, p. 400)

Glew and associates also provide a synopsis of some of the major points of conceptual confusion regarding participation. Their review of the literature uncovers many different perspectives on participation that help to fuel this confusion. They

formulate questions on participation such as; Is it a technique or a philosophy? Is it a unique or an overlapping concept? Is the individual or the organization the appropriate level of analysis? Is it an over-arching philosophy? Is it a broader social issue concerned with manipulation, oppression, and control? (Glew et al., 1995, p. 400-401) This seems to reinforce their conclusion that participation is contextually defined. In fact, Glew and associates present a framework that is based on the idea that the *intended* participation program implemented may not resemble the *actual* program that results due to the influence of organizational and individual factors. The individual factors cited include personality, individual ability, demographics, and willingness to participate. (Glew et al., 1995, p. 405-407) Organizational factors include size, purpose, culture, type of task, task interdependence, task complexity, labor force factors, and national cultural values. (Glew et al., 1995, p. 405-407)

Contextual variables in participation research are a theme that is pursued by other scholars as well. Margulies and Black argue that the assumptions and values of those responsible for the design and implementation of the participative effort has a significant impact on it. (Margulies and Black 1987, p. 393) Their review of the literature produced three rationales for participation and these rationales are indicative of the underlying values and assumptions. The three rationales for undertaking participative programs are human relations, human resources, and democratic/socialistic.

The human relations rationale is purely instrumental in nature. Management sees participation as a tool available to achieve organizational effectiveness. (Margulies and Black 1987, p. 394) It is not pursued to provide the organizational members with any sense of belonging or commitment or any other intrinsic motivation. Though these may

result as an unintended consequence, the primary reason for undertaking a participation program is to achieve some goal of management.

The human resources rationale is "founded on the belief that individuals have great untapped potential, including being active, independent, capable of self-control, and making positive contributions to the organization." (Margulies and Black 1987, p. 394) Within this rationale, participative programs are undertaken with a two-pronged approach; one is to help organizational members grow and develop their potential and the second is to facilitate positive organizational outcomes.

The democratic/socialistic rationale is also based on the belief that organizational members have the capacity for wise and effective decision-making and to act in a responsible manner that will benefit themselves and the collective good. (Margulies and Black 1987, p. 394) It is thought that participation will lead to organizational effectiveness, but it is valued independently of its impact on effectiveness because it is considered to be a right of the worker to have a say in the decisions affecting their working life. Under this rationale, participation should be pursued even if it negatively impacts effectiveness.

Margulies and Black stress that the rationale for undertaking a participative program will impact the parameters of the effort. The parameters of participation are issues, processes, and degree. (Margulies and Black 1987, pp. 390-392) Issues refer to the range of topics that organizational members are allowed to address in a participation program. These can vary from micro issues dealing with work station matters or day-to-day management decisions to macro issues dealing with strategy and capital decisions. (Margulies and Black 1987, p. 390) Process refers to the point that organizational

members are allowed to influence decision-making or problem solving routines.

Margulies and Black provide a general model of decision-making and/or problem solving to assist in evaluating this parameter. The points of the model include; problem identification, generating alternatives, choosing solutions, planning implementation, and evaluation. (Margulies and Black 1987, pp. 391-392) Degree refers to the level of participation organizational members are allowed in decision-making. Margulies and Black place participation on a continuum that ranges from none to full. Full participation has no distinction between managers and subordinates (Margulies and Black 1987, pp. 390-392) The no participation end of the continuum resembles the bureaucratic-mechanistic organization described above, where managers make all the decisions. Writers have identified several forms of participation between these two extremes.

Margulies and Black combine the rationales for participation with the parameters of participation to illustrate the contextual nature of participative efforts and the forms they will produce. They argue that each of the three rationales identified above for undertaking a participative effort will influence the three parameters of issues, process and degree in different ways. For example, a democratic/socialistic rationale would be expected to involve organizational members in a wider range of issues, with them being involved in more steps of the decision-making process, and having a greater degree of participation. Conversely, an instrumental approach as characterized by the human relations rationale may expected to have participative programs that are narrow in scope, limited in participation and less influence on the decision-making process.

Like Glew and associates, Margulies and Black recognize the influence of other contextual variables on the outcomes of participative programs. In addition to the

rationales above, Margulies and Black identify situational factors such as the knowledge and skills of the participants, leader confidence in subordinates and in the concept of participation, individual needs, subordinate confidence in the concept of participation, the valence of expected outcomes, and time. (Margulies and Black 1987, pp. 386-390)

Sagie and Aycan also stress the contextual nature of participation by directing their focus on organizational culture. (2003) They employ two cultural dimensions, power distance and individualism, to classify approaches to participative decision-making. Power distance is defined as "the extent to which the society and its institutions accept power, hierarchy, and inequality as legitimate." (Sagie and Aycan 2003, p. 456) Individualism is concerned with how a particular society or sub-culture defines itself, as either an independent agent or as a part of the collective. (Sagie and Aycan 2003, p. 456) The combination of these two dimensions, which each range from low/medium to high, produces four approaches to participative decision-making. These are face-to-face, collective, pseudo, and paternalistic. (Sagie and Aycan 2003, p. 457)

Table 2. 1 - Approaches to Participative Decision-Making

		Power Distance	
		High	Low/Medium
Individualism	High	Pseudo	Face-to-Face
	Low/Medium	Paternalistic	Collective

Source: Sagie and Aycan 2003

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A face-to-face approach to participative decision-making results from low/ medium power distance and high individualism. This is characterized by a situation where supervisors consult with individual employees on decisions as opposed to any group involvement. (Sagie and Aycan 2003, pp. 457-460) A combination of low/medium power distance and low/medium individualism produces a collective approach to decision-making. In this case, management and the workers' group share tangible power or authority throughout the decision-making process." (Sagie and Aycan 2003, p. 469) A paternalistic approach to decision-making results from a combination of low/medium individualism and high power distance. In this situation, "the role of the superior is to provide guidance, protection, nurturance, and care to the subordinate, and the role of the subordinate…is to be loyal and deferent to the superior." (Sagie and Aycan 2003, p. 462) The fourth combination is labeled pseudo participative decision-making. This is characterized as having high power distance and high individualism and is "directive management covered with a mask of participation; yet, the contradiction between the egalitarian preaching and actual autocracy is well understood…by managers and workers." (Sagie and Aycan 2003, p. 463) Though Sagie and Aycan focused on national cultural factors, they recognize that "subcultures, industrial sectors, companies, or even departments" can vary along the power distance and individualism dimensions. (Sagie and Aycan 2003, p. 467) They conclude that cultural dimensions need to be examined and could help explain the willingness or reluctance to initiate participative decision-making. (Sagie and Aycan 2003, p. 468)

Despite conceptual confusion and the situational factors confounding the outcomes of participative efforts, attempts have been made to define participation in the

literature. The result is a plethora of definitions that often bleeds into the related concepts of empowerment and involvement.

Definitions from the Literature

In the organizational theory literature, there are several similar concepts based on the idea of soliciting some level of input from organizational members in order to increase organizational effectiveness. These concepts have different labels, such as empowerment, participation, and involvement. A review of the literature reveals that these concepts are at times used interchangeably, while at other times they are used distinctively. A review of some of the definitions found in the literature will reveal this inconsistency.

Some writers define participation at different levels. Wagner has done extensive research on participation, yet he takes a simplistic approach to defining participation. Wagner states that "participation is a process in which influence is shared among individuals who are otherwise hierarchical unequals. Participatory management practices thus balance the involvement of managers and their subordinates in information-processing, decision-making, or problem solving endeavors." (Wagner 1994, p. 312)

Kaler also ascribes to the simplistic definition of participation in order to produce coherent meaning out of a complex phenomena. He acknowledges that participation has to do with employees sharing or partaking, but "what they share in and the way in which they share is left open." He defines participation simply as "any arrangement under which employees have some sort of share in some aspect of a business." (Kaler 1999, p. 125) He even goes on to state that participation is a broader concept than employee

involvement. The term involvement "tells us nothing about the nature of the involving. 'Participation' does. It tells us it is involvement through sharing." (Kaler 1999, p. 126)

Kaler divides participation into operational and financial components. (1999) Financial participation is divided into ownership and income varieties. These categories refer to the types of financial arrangements that reinforce participation. Ownership participation generally means giving employees shares of stock, while income participation deals with profit sharing plans. (Kaler 1999, pp. 128-129) On the other hand, operational participation consists of an array of decision-making styles that include delegation, information, consultation, and co-determination. (Kaler 1999, pp. 127-128) This array is based on a progression of increasing decision-making influence exercised by employees. In delegation, managers simply assign decision-making powers to employees. The information form of participation occurs when managers inform employees of the decisions made by management. Consultation refers to employers who make unilateral decisions after discussing the issues with employees. Co-determination refers to a participative style that has equal shares of decision-making power allocated between employees and employers. All of these participative forms are associated with different scopes of authority regarding which decisions are made by organizational members.

Despite citing the conceptual confusion surrounding participation in their literature review, Glew, et al. provides a more substantive definition of participation that is based on "purposeful behavior by management" and "provides for a wide array of participation arrangements." (Glew, et al., 1995, p. 402) Their proposed definition is:

> A conscious and intended effort by individuals at a higher level
> in an organization to provide visible extra-role or role-expanding

opportunities for individuals or groups at a lower level in the
organization to have a greater voice in one or more areas of
organizational performance. (p. 402)

Chisholm and Vansina (1993) also recognize the lack of a relatively clear

definition of the term participation, in spite of the voluminous research done on the

subject. Eschewing the more narrow decision-making perspective, they take a broader

management philosophy view and state that "participation is not a single 'thing' but a

complex system of structures, processes, values, and basic assumptions that pervade the

ways an organization views and relates to employees." (Chisholm and Vansina 1993, p.

296) They recognize that participation is a complex construct and identify three critical

dimensions; depth, degree, and quality. Depth refers the system level (job, work group, or

departmental) and scope (immediate job related concerns through organizational

strategies) of decisions that involve employees. (Chisholm and Vansina 1993, p. 296)

Degree "deals with the extent to which an organization uses participation to make

decisions." (Chisholm and Vansina 1993, p. 296)   The quality dimension is concerned

with member interpretations of their participative experiences; how it is relevant to their

jobs, how much trust they have in the organization, and how much impact it has.

(Chisholm and Vansina 1993, p. 296)

As Glew and associates have stated (Glew, et al., 1995) there are a variety of

ways participation is approached in the literature, but there is one overarching pattern that

can be detected. Participation provides the beginning of an intellectual chain reaction of

ideas on the nature of employee and management interactions.   A perusal of the literature

will also reveal that the term "empowerment" is frequently associated with participation.

A review of some of the definitions will help build an analytical framework based on

participation and empowerment as components that eventually merge to create the involvement construct.

In an often cited work, Spreitzer argues that empowerment is not "an enduring personality trait generalizable across situations, but rather a set of cognitions shaped by a work environment." (Spreitzer 1995, p. 1444) She defines empowerment as:

> A motivational construct manifested in four cognitions: meaning, competence, self-determination, and impact. Together, these four cognitions reflect an active rather than a passive, orientation to a work role. By active orientation, I mean an orientation in which an individual wishes and feels able to shape his or her work role and context. (Spreitzer 1995, p. 1444)

The key point of this definition is the "power" that individuals perceive they have in shaping their work environment. This point is emphasized in other definitions of empowerment as well. Conger and Kanungo define empowerment as:

> a process of enhancing feelings of self-efficacy among organ-izational members through the identification of conditions that foster powerlessness and through their removal by both formal organizational practices and informal techniques of providing efficacy information. (Conger and Kanungo 1988, p. 474)

Again, the focus of this definition is on giving employees more power over their working environment.   Like participation, empowerment is seen as being influenced by context. Yeh-Yun Lin argues that empowerment in an organization involves "a power bestower (leader) and a bestowee (employee)." (1998, p. 224)   She further argues that empowerment "is an ongoing process affected by factors such as organizational culture and management practices." (1998, p. 224) She proposes an empowerment model consisting of four components; leaders, employees, organizational culture, and management practices. (Yeh-Yun Lin 1998, p. 224)   The interplay of these components

influences the level of empowerment perceived by employees, suggesting that empowerment is affected by context, just like participation is. But not all definitions of empowerment deal exclusively with the level of power employees have in the organization. Some definitions sound very much like the participation definitions referred to above.

Olshfski and Cunningham define empowerment as "delegation or devolution or sharing of power, authority, or responsibility by those higher in the organizational structure to those at the lower levels of the organization." (1998). This is a general definition that is centered on the idea of management encouraging employees to take a more active role in the management of the organization to which they belong. Olshfski and Cunningham studied 23 managers participating in a summer executive development program and asked them to relay a story regarding a policy situation they were in with their superior. The stories were analyzed and coded to record how the problem was identified, if the response was within the normal authority and responsibility of their job, and the response of the supervising manager. They found that managerial empowerment is limited by supervisors' willingness to allow managers to have the latitude to address problems and the willingness of the manager to go beyond their formal job descriptions. From this perspective, the definition deals more with managers restraining the power of employees then with employees developing and exercising their power in order to make the organization more effective.

The definitions of empowerment and participation have similarities. They are both based on the premise of sharing some degree of power among a wider range of organizational members. There is also similarity in that this sharing is initiated from the

top of the organization. They are also similar in that they are both in part influenced by the context of the organization. But the differences between these concepts illustrate how participation and empowerment can be viewed as ideas that are being refined over time. The initial idea was based on the thesis that positive organizational outcomes would be associated with greater participation by employees. Lower-level forms of participation, such as consultation on decisions and opinion surveys, were designed to solicit information from employees, but employers still held all the decision-making power. In other words, being informed on decisions produced little positive organizational outcomes. Scholarly thought was focused on employee power, where attention was directed to shifting power from managers to others in the organization. This was the impetus for empowerment research. Participation had to move from mere information provision to the ability for workers to actually have the power to make changes. The next evolution of thought in the participation-empowerment chain addresses the expansion of employee decision-making power to a greater range of organizational practices. This research emphasis can be broadly defined as involvement.

Marchington, Wilkinson, Ackers, and Goodman utilize the term employee involvement, as opposed to participation or empowerment (1994), which contrary to Kaler above, is seen as being too conceptually narrow. Their definition of employee involvement is:

> those activities which are initiated principally by managements,
> and are designed to increase the amount of information which
> employees receive about their organization, provide them with
> the opportunity to contribute to decisions made at the workplace
> level, and ultimately (in theory at least) enhance their commitment
> to their employer. (Marchington, et al., 1994, p. 869)

This definition is similar to the ones above for participation and empowerment because it deals with sharing of information by managers and allowing workers to make some type of decisions. But the key evolutionary link from participation and empowerment to involvement is missing. That link deals with the scope of decisions employees are allowed to make.

Shadur, Kienzele, and Rodwell (1999) review work done by Eccles and by Bowen and Lawler and then present a discussion of the different types of involvement outlined in those articles. Shadur, et al. use Bowen and Lawler's idea that involvement consists of three levels; suggestion, job, and high involvement. These three levels are based on a progression of an increasingly wider range of decision-making scope and authority. Suggestion involvement is based on formal mechanisms or procedures that are designed to give employees at lower levels the opportunity to communicate their ideas to managers in higher levels, with decision-making control being retained by management. (Shadur et al., 1999, p. 482)   Job involvement is described as "including teamwork and the enhancement of productivity through finding better ways of organizing and carrying out tasks." (Shadur et al., 1999, p. 482)   This level "requires the sharing of job roles and responsibilities through teamwork, with supervisors having less control in directing the activities of teams and taking on a more supportive role." (Shadur et al., 1999, p. 482) The complexity of some organizations requires managers to cede control to those with more in-depth knowledge of work processes. High involvement " goes beyond suggestion involvement and job involvement by allowing employees to participate in decision-making." (Shadur et al., 1999, p. 483)   It differs from suggestion involvement in that organizational members will possess final decision-making control, and it differs

from job involvement in that organizational members will have a wider range of

decision-making authority and will not be restricted to job design issues. Employees may

be involved in decisions concerning selection and retention of employees, reward systems

and capital investment decisions.

Adding to the conceptual confusion, Pardo del Val and Lloyd consider

"empowerment, participative management, and participation to be synonyms" while

involvement is a characteristic "included in empowerment." (Pardo del Val and Lloyd

2003, p. 102)   But they employ a definition of empowerment that sounds much like the

definition of high involvement used by Shadur, et al., above. According to Pardo del Val

and Lloyd:

> In essence, empowerment is the management style where
> managers share with the rest of the organizational members
> their influence in the decision-making process – that is to say,
> the collaboration in the decision-making process is not limited
> to those positions with formal power – with certain characteristics
> as far as information systems, training, rewards, power sharing,
> leadership style and organizational culture are concerned. (2003, pp. 102-103)

They go on to state that decision-making can be divided into several stages and that

shared influence can vary among these stages. (Pardo del Val and Lloyd 2003, p. 103) In

essence, this is similar to Shadur, et al.'s three levels of involvement, with empowerment

substituted for involvement.

Involvement can be seen as affecting a larger degree of organizational systems

than the limited concepts of empowerment or participation. It is a systematic approach

that moves beyond shared decision-making to include a wider range of organizational

processes. The simultaneous adjustment of personnel, production, information, and

structural systems represents a fundamental change in management. The narrow scope of

empowerment and participation still has managers retaining much of their traditional authority. The concept of involvement is a radical departure from the traditional management-worker relationship. Traditional management control is replaced by the organizational members taking responsibility for managing themselves.

Just as there is a wide variety of definitions regarding concepts related to participation, there is a wide variety of different studies that address different outcomes associated with the concept. The next section will discuss some of the outcomes studied in participation research projects.

Outcomes Studied

At first glance, the statement "more employee involvement leads to improved performance" seems simple, but it belies the underlying complex concepts. There have been several reviews of the literature on participation, empowerment and/or involvement and the results have been mixed and subject to different interpretation. These studies reflect the conceptual confusion identified above. At times, these differences in interpretation has produced heated debates in the literature, as characterized by a well known exchange between scholars studying the same data.

In 1988, Cotton and colleagues undertook a literature review to answer the question "are different forms of PDM [participative decision-making] associated with different outcomes?" (Cotton, Vollrath, Lengnick-Hall, and Froggatt 1988, p. 8) From the literature, Cotton, et al. devised a five-point analytic framework to classify 91 articles on participative decision-making. The framework allowed decision-making processes to be evaluated on the following dimensions; formal-informal participation, direct-indirect

participation, the level of decision influence, the content of the decisions, and the time frame of the decision-making process. (Cotton et al., 1988, p. 9-10)

From the 91 studies, Cotton et al., identified six configurations of participative decision-making. They are participation in work decisions, consultative participation, short-term participation, informal participation, employee ownership, and representative participation. (Cotton et al., 1988, p. 10) The authors state that PDM can be evaluated in terms of various outcomes (p. 9), but they set out to analyze the different configurations' effects on productivity and job satisfaction, outcomes which were addressed in previous literature reviews. The results found in this study indicate that "different forms of PDM are associated with markedly different outcomes...effectiveness varies with both the form of PDM and the criterion for effectiveness." (p. 16) They suggest that the success of each form of participation may be related to the context in which it is employed, and in fact context is one of their suggested areas of additional research.

Interesting enough, Cotton et al's 1988 article invoked strong criticism in 1990 by Carrie Leana and her colleagues. They criticize Cotton and his colleagues for what they consider to be less than rigorous research methods. Leana and associates accuse Cotton, et al. of committing errors in their study, such as, using "an invalid classification system, a seemingly arbitrary selection of studies for classification, and numerous errors in reporting the results of the studies." (Leana, Locke, and Schweiger, 1990, p. 137) Leana et al state that Cotton et al's six form classification scheme of participative decision-making violated two major characteristics of sound classification; mutual exclusivity among categories and internal homogeneity within categories. (Leana et al., 1990, p. 138) By examining various cases within the same category, Leana et al. conclude that the

classification scheme employed by Cotton and associates does not clearly distinguish the six categories from one another, as several cases could have been classified in other categories. As far as selection of which studies to include in their review, Leana et al. state that Cotton excluded studies that were clearly appropriate to PDM research and included ones that were clearly inappropriate.   They also cite Cotton et al.'s errors in reporting and summarizing the outcomes of the studies as lessening support for their conclusion. After considering these errors, they undertook their own review of the same literature and found little support for Cotton et al.'s conclusions regarding the effects of participation forms on outcomes.

Leana et al. made some valid points regarding some methodological procedures employed by Cotton et al., especially relating to the lack of measures of interrater reliability. (Leana et al., 1990, p. 141) They also criticized the inclusion of "percept-percept" data. Data collected via these methods rely on measures of participation and outcomes collected from a single questionnaire at a single point in time from the same group of respondents. (Leana et al., 1990, p. 144) The authors claim that this method artificially inflates the relationships between participation and outcomes. When controlling for methodology, Leana et al. claim that the relationship between participation form and the outcome variables of productivity and job satisfaction does not hold up. (p. 144)

This criticism of Cotton and associates' work was not unanswered, as he and his colleagues responded that Leana and her associates' critique "reveals some misunderstandings, some major differences in judgment, and a few minor problems" with their analysis, but the conclusion is sound. (Cotton, Vollrath, Lengnick-Hall, and Froggatt

et al., 1990, p. 147) Cotton et al. concede that their study could have been improved

through the use of a more formal process of review that employed multiple raters and that

they did make mistakes in interpreting the results of the literature studied. As for the

criticisms directed to what PDM studies were included in their 1988 review, Cotton and

colleagues state that Leana's team took a more purist approach to participation

manipulations, while they used a broader, more conceptual definition of participation.

(Cotton et al., 1990, p. 150)

One point that Cotton et al. (1988, 1990) and Leana et al. (1990) agree on is the

need for more research to be directed at the contextual variables and mechanisms

surrounding participative endeavors. Cotton et al. cite factors such as the nature of the

decision and characteristics of subordinates. (1988, p. 16)   The contingency nature of

participation is a theme that is repeated throughout the literature.

In 1993, Cotton embarked on his own review of the employee involvement

literature and he concedes that the involvement concept is also fractured, with researchers

investigating it from many different perspectives. (p. 11) He undertook his review with

the intention of presenting empirical knowledge about the different forms of involvement

and to deduce which forms are effective and what factors are involved. (Cotton 1993, p.

11)

Cotton clearly makes the distinction between participation and involvement.

Cotton states that participation refers to a more limited process, whereas involvement has

a wider range of applicability. (Cotton 1993, p. 14)   Cotton draws on Lawler and

Mohrman's definition of involvement and defines it as a process designed to "use the

entire capacity of workers" and is designed to "encourage employee commitment to

organizational success" through the use of "some combination of information, influence, and/or incentives." (Cotton 1993, p. 3) Cotton states that previous reviews of the literature used the more limited concept of employee participation, which tended to narrowly focus on decision-making processes.

After summarizing a variety of different participation models, Cotton claims that it is nearly impossible to integrate the models because they focus on different outcomes, use different theoretical perspectives, and have different definitions of participation. (Cotton 1993, p. 26)   He relies on five dimensions (borrowed from Dachler & Wilpert) to guide his own review of different forms of employee involvement. These include; formal-informal employee involvement, direct –indirect involvement, level of access (amount of influence), content of issues (major or minor decisions), and the social range of involvement (who from the organization is involved). (Cotton 1993, pp. 27-29) These dimensions are then applied to research on the following forms of employee involvement; Quality of Work Life Programs, Quality Circles, Gainsharing Plans, Representative Participation, Job Enrichment, Self-Directed Work Teams, and Employee Ownership. Cotton concludes that "considerable variance exists in outcomes across the assorted forms of employee involvement." (1993, p. 231) Using the outcomes of job attitudes and productivity to gauge effectiveness, Cotton found that self-directed work teams and gainsharing plans had the strongest effects while quality circles and representative participation had the weakest effects.

Though his literature review on employee involvement found that different forms vary in terms of productivity and employee attitudes, Cotton suggested that four factors differentiate more effective forms from the others. (1993, p. 233) Forms were more

likely to be successful if the involvement is focused on everyday work decisions, allows employees the power to make decisions, allows for changes to be instigated by the worker, and includes a major change in the work life of employees. (Cotton 1993, pp. 233-234) Cotton concludes that there are no guarantees with employee involvement, and the implementation process is a key to success but, success is also determined by the form of involvement and the outcome studied. (Cotton 1993, pp. 242-243)

A cursory review of the literature reveals that there is a wide variety of perspectives addressed in participation and involvement research. Not only is there variety in the outcomes hypothesized, there is also variety in the research methods employed.

Glew and associates state that "although performance and satisfaction are clearly the most frequently studied outcomes, a long list of additional outcomes has also been hypothesized to result from participation programs." (Glew et al., 1995, p. 412)   Their list of outcomes provided include absenteeism, turnover, intention to quit, grievances, costs of performance, quality of work life, commitment, perceptions of fairness, motivation, clarity of decision-making and individual well being. They argue that if any outcome variables are related to any participative programs, the relationship will be dependent on the amount of experience an individual has with such programs. (Glew et al., 1995, p. 414) Limited experience with participative programs will not result in any significant impacts on organizational outcomes, whereas long term experiences with participative programs will result in stronger relationships with attitudes and behaviors. (Glew et al., 1995, pp. 414-415)

Berg (1997) looks at the interplay between the type of change and the type of employee participation using eight case studies of change efforts in Norwegian public service organizations. Berg employed a classification scheme to categorize participation and one to categorize change efforts. Participation was classified as either delegative or consultative, and as either direct or indirect. The consultative category included those efforts where employees gave an opinion, while management retained the final say. The delegative category is comprised of those change efforts that gave employees the authority to find solutions and take action. Direct participation occurs when individuals represent themselves, while indirect participation occurs when organizational members select some to represent them and make decisions for them.

Berg's change effort classification scheme consists of three categories: reorganizations or re-structuring, introduction of new systems or procedures, and establishment of new work forms. Berg concludes that if the goal of the change effort is broad, such as continuous improvement, then direct and broad participation programs are best. If the implementation of a specific technique or goal is desired, then indirect and limited participation is best. Berg also concludes that while top management support is crucial to the success of participation programs, the interest and competencies of lower level managers are just as critical. She further states that if managers want employees to take responsibility for change efforts, then they must cede control and allow employees to make decisions and take the steps to implement them.

Management support and employee commitment are themes stressed in other research projects as well. Tesluk, Vance, and Mathieu (1999) view the involvement construct from a systems level perspective. They suggest that this approach more

accurately reflects the multiple involvement practices simultaneously implemented by organizations. Their study focuses on a state department of transportation which is divided into 11 roughly equivalent engineering districts. Each district is further divided into functional units such as construction, design, and maintenance. The authors investigated the interactions between district manager attitudes regarding participation, unit manager attitudes regarding participation and employee attitudes and behaviors. Data were collected via survey instruments that were administered to district employee involvement coordinators, district managers, unit managers, and the rank and file employees.

District managers, who are equated with top management in this study, are key to the success of employee involvement programs. The authors theorize that top managers who are committed to a participative program will reflect it in their attitudes and behaviors. Their actions, such as providing necessary resources and training programs, help establish the climate of the organization. Tesluk et al. rely on Schneider's definition of organizational climate, which defines it as "organizational members' shared perceptions of formal and informal organizational rewards, expectations, policies, and procedures." (Tesluk et al., 1999) The findings presented show that district managers' attitudes are positively related to the extent of district involvement practices and support, to unit managers' attitudes and actions regarding participation, and to employee percep-tions of the district's and unit's participative climate. Top management sets the stage for the success of the program by demonstrating their commitment to participatory ideals.

Unit managers, who were classified as middle management, were also seen as another key ingredient to the success of employee involvement programs. Tesluk et al.

found that unit managers' attitudes regarding participation was positively related to employees' participation in decision-making. In addition, they found that the closer psychological proximity a manager has to employees, the more influence the manager has. For example, the district may have an overall supportive climate for participation, but this may be mitigated by a particular unit's adverse stance on participation, which stems from a unit manager's resistance to the program. This underscores the need for managers who are closest to lower level employees to play a key role in the success of a participative program.

Tesluk et al., report a "cascading effect" where support for participation at one organizational level sets a context for support at subsequent levels. For example, using the transportation department model, a district manager's enthusiasm and support for involvement programs will spill over into the unit level. If the unit manager is similarly enthusiastic and supportive of involvement efforts, it increases the chance of employees supporting the program. Individual participation in employee involvement in was found to be greatest when the climates at multiple organizational levels are consistent.

From a practical point of view, the authors provide evidence that mid-level managers are in a position to either "make or break" employee involvement efforts. They recommend that these managers be fully included in any involvement efforts. Top managers establish the context and conditions for participation, while middle managers influence employees' motivation to participate. Middle manager attitudes and actions, due to their closer proximity to lower levels of the organization, positively affect employee involvement participation, extrinsic job satisfaction, and the belief that things could improve.

Tesluk et al.'s, conclusions about the importance of middle managers in any involvement effort is supported by Fenton-O'Creevy (2001). His study was based on a postal survey of 4,500 members of the Institute of Management, a professional organization in the United Kingdom. He concludes that middle managers are not the scapegoats for failed employee involvement programs; rather, their attitudes tend to mirror that of senior managers. (Fenton-O'Creevy 2001, p. 37) He further states that managers' own sense of empowerment is key, and suggests that managers need to be the first target of any involvement effort so they can then develop a positive outlook and then go forth and implement involvement initiatives to subordinates. (Fenton-O'Creevy 2001, p. 37) This is similar to Tesluk et al.'s cascading effect.

Recent studies have associated involvement management practices with positive organizational outcomes such as; higher employee satisfaction and lower costs in veterans' healthcare facilities (Harmon, Scotti, Behson, and Farias 2003), long term sustainability in the airline business (Kaufman 2003), employee job satisfaction in local government (Kim 2002), and reduced employee depression in residential care facilities (Mackie, Holahan, and Gottlieb 2001).

The variety of hypothesized outcomes, contextual variables, and research methods employed clearly diffuses the research on employee participation, empowerment, and involvement. This situation also inhibits the development of a coherent and agreed upon model to follow. One researcher, Edward E. Lawler III, has attempted to develop a model based on the fusion of these three concepts. It is based on the premise of involving employees, in meaningful ways, in the widest range of organizational affairs. That model will be reviewed in the next section.

Lawler's Model of High Involvement

To summarize to this point, one of the solutions offered to address the humanistic and effectiveness inadequacies of the bureaucratic-mechanistic form of organizing is to increase the level of participation of organizational members. The literature on participation is characterized as diffused and disjointed. A great deal of overlap exists with the closely related concepts of empowerment and involvement. These three concepts can be viewed as a logical progression of ideas, as each step in the progression refines the previous one. Participation was a solution offered to cure the ills of bureaucracy, but empowerment research revealed the need for employees to feel they have the actual power to make a difference. Involvement research widened the scope of activities in which employees could be participating, as scholars discovered that employees not only need the power to make decisions, but they also need to make decisions that are important. This latter concept represented a new way of looking at organizing.

The New Logic of Organizing

Previous research has been directed towards the examination of the effects of participative programs on some outcome such as job satisfaction or productivity. Many of these efforts were limited to a narrow segment of the organization. One researcher, Edward Lawler III, has eschewed participative interactions that are limited to a few groups or a few individuals as being doomed to failure because they "are foreign entities in an environment that is hostile to them." (Lawler 1986, p.27) Lawler rejects the

limited perspective of the term "participation" and identifies his model as being based on

the wider perspective of high involvement. Lawler sees participation as an integral

component of involvement, but he advocates the total permeation of participative

techniques throughout the organization. (Interestingly enough, despite this distinction,

Lawler at times uses involvement and participation somewhat interchangeably.) This is

what he refers to as "high involvement." An organization utilizing a high involvement

approach is one that takes:

> a comprehensive approach to organizing and managing that
> involves new approaches to reward systems, structure, work design,
> communication, measurement, and human resource management –
> in short, all the systems and practices that are critical to organizational
> effectiveness. (Lawler 1996b, p. 23)

In order to succeed, high involvement techniques must be installed throughout the

organization. Lawler's approach to high involvement management is based on what he

calls the "new logic principles" for organizing (Lawler 1996b, p 22-42) :

> 1. Organization can be the ultimate competitive advantage
> 2. Involvement is the most effective source of control
> 3. All employees must add significant value
> 4. Lateral processes are the key to organizational effectiveness
> 5. Organizations should be designed around products and customers
> 6. Effective leadership is the key to organizational effectiveness

From the principles above, which in reality are statement of beliefs, Lawler constructs his

image of an organization best structured to deal with the fast moving, competitive

environment facing many American organizations. The organization described is

relatively flat, with few layers of management, as much of the command and control

activities of the traditional manager are now assumed by team-based work units. Another

result of the elimination of hierarchical layers is closer contact between the organization's

customers and it workers, which facilitates the feedback process and provides team-based work units with a sense of responsibility for customer satisfaction.

Organizational success is achieved by providing employees with extensive training, not only in technical production or service provision processes, but in the general business environment as well. Employees need to know how the tasks they perform fit with the tasks done by others in the organization. In addition, they also need to know how their organization is performing relative to their competitors. The point of disseminating this type of information throughout the organization is to encourage members to accept responsibility for the success of the organization. Reward systems are tied to organizational success to reinforce this relationship.

At the heart of Lawler's model is what he calls the key characteristics of participative approaches; power, rewards, information, and knowledge. (Lawler 1986, pp. 21-28) Lawler claims that these four elements "can be used to describe any participative management program. Their presence or absence at the lower levels in the organization is crucial to determining how effective a participative management program is." (Lawler 1986, p. 22) A description of each of these elements follows.

Power

This element refers to decision-making styles utilized in the organization. Decision-making exists at several levels in any organization and can range from routine day-to-day decisions to high level business strategy decisions. (Lawler 1986, pp. 22-23) Decision-making styles can vary from autocratic to consensus building to purely democratic. (Lawler 1986, pp. 22-23) In order to foster a sense of involvement, Lawler

advocates decision-making processes that allow organizational members to make the

decisions that influence their work lives. He states that the members who are relegated to

the lower levels of a traditional hierarchy are in a better position to make some decisions

due to their expertise and close positioning to actual work processes.

Rewards

This element is an important determinant of organizational behavior and must be

considered in any participation program. (Lawler 1996b, pp. 195-196; Lawler 1986, pp.

25-26) Though rewards may have both intrinsic and extrinsic components, most

individuals "will not perform at a world class level for the sheer intrinsic joy of working

hard and doing a good job. To perform their best, most individuals need to have financial

or other extrinsic rewards tied to their performance." (Lawler 1996b, p. 198)   Lawler

introduces the concept of "line of sight" to illustrate the important link between workers'

performance and the rewards they receive. (Lawler 1996b, p. 210) Essentially, Lawler

states that clear linkages need to exist so employees can see how their efforts affect

organizational success, and then based on that success, they can then clearly see how it

affects their rewards. These clear linkages help to create a common sense of purpose and

involvement. (Lawler 1996b, p. 213)

Information

Lawler claims that information is "at the very core of what makes a group of

people an organization." (Lawler 1986, p. 24)   An organization based on the "new logic

principles" outlined above emphasizes "that employees throughout the organization must

add value, it follows that employees need much information, information that allows them to manage themselves and that gives them a line of sight to controllable business performance." (Lawler 1996b, p. 244) In contrast to traditional organizations whose operations are cloaked in secrecy and information is on a "need-to-know" basis, Lawler's High Involvement model promotes the free and open exchange of information. This is a necessary step, given that control is not achieved through traditional hierarchical structures.   Lawler writes that "an organization can guide employees' behavior only if it consistently and frequently communicates to them what the plans, goals, and objectives are for each work group and for the total organization." (Lawler 1996b, p. 224)

Knowledge

Of the final element of participation, Lawler writes that "at the core of any effort to involve employees in an organizational decision is their expertise and knowledge regarding the decision and the operation of the organization in general." (Lawler 1986, p. 26). Lawler stresses that in order for high involvement interventions to succeed, knowledge must be spread throughout the entire organization. Not only is knowledge expected to be spread out among all members, but the members are also expected to be knowledgeable about a wider range of issues. (Lawler 1986, pp. 31-32) Organizational members are expected to be knowledgeable about their specific area of responsibility, how these tasks relate to the tasks done by others, and how they relate to organizational success. In addition, members must be well versed in group and interpersonal skills, leadership skills, and the economics of business. (Lawler 1986, pp. 26-27) The point of having organization members acquire such a broad knowledge base is to develop a sense

of ownership for organizational results, which requires a firm grasp of the underlying

relationships between members' actions and the actions of others.

Effective Participation Programs

In order for any participation program to be effective, Lawler claims that the four

attributes of participation above must be spread throughout the organization. (Lawler

1986, pp. 42-43)   Lawler also makes the case that this model is integrated, as a change in

one of the four attributes without change in the others will result in ineffectiveness and

organizational systems incongruency. (Lawler 1986, pp. 42-43) He expresses this

relationship as follows:

Participation Program Effectiveness=Rewards * Knowledge * Power * Information Flow

Lawler's model takes a holistic view that expands beyond participation in

decision-making. The assumption is that involving employees at all levels in a wider

variety of organizational processes will lead to desirable outcomes such as higher

motivation, worker satisfaction, better decision quality, less resistance to change, higher

quality goods and services, and fewer managers. (Lawler 1986, pp. 37-38)

What is not explicitly stated in the above relationship is the bridge between

effectiveness and the elements of participation (power, rewards, information, and

knowledge.) In other words, why does effectiveness result? As suggested by

Marchington et al. one possible answer lies in the level of commitment employees have

to the organization. (1994, p. 869) The next section will examine organizational

commitment in more detail and then incorporate that construct into Lawler's model.

Organizational Commitment

The underlying argument of Lawler's model is the dispersion of power, rewards, information and knowledge throughout the organization will lead to effectiveness. But Lawler's model seems to be missing a piece. Are those elements of high involvement management enough to adequately explain the relationship with organizational effectiveness? Given that employees have power, are well rewarded, have access to information, and have knowledge of organizational processes, why will they perform at a higher level and make the organization more effective? This research effort proposes that organizational commitment is the missing piece. If an organization is able to solicit commitment from its members, it will lead to positive outcomes that will make the organization more effective and productive. These outcomes include better job performance, lower absenteeism and turnover, behaviors that go beyond formal prescriptions (Hunt and Morgan 1995, p. 1570), innovation, internal cooperation, external competition (Dutton, Dukerich, and Harquail 1994, p. 254) and increased organizational survival (Robertson and Tang 1995, p. 67; Zeffane 1994, p. 978; Dutton et al. 1994, p. 254) Commitment is directed toward strengthening the bond between the individual/group and the organization.

Some scholars, however, point to the negative aspects associated with organization commitment. Brockner, Tyler, and Cooper-Schneider point out that when highly committed individuals feel they are treated unfairly by the organization, their level of commitment declines sharply. (1992, p. 241) They make the interesting point that it may be easier to tear down organizational commitment than it is to build it. (Brockner et al., 1992, p. 260)

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Schnake writes that some aspects of organizational commitment, such as pitching in to help out a fellow worker who falls behind, can result in counterproductive work behaviors or other undesirable side effects. (Schnake 1991, p. 737) This seems to suggest that in certain circumstances, commitment can exert a negative influence on effectiveness as it shifts focus away from the organization and its goals to a more narrow and localized work unit where commitment is directed to potential non-organizational goals and objectives. Other contexts can mediate the affects of organizational commitment.

Bacon and Blyton report that efforts to increase organizational commitment through implementing involvement practices will fail if they are pursued in a "backdrop of uncertainty, insecurity, and mistrust." (Bacon and Blyton 2001, p. 14) They conducted a study of involvement practices in the international steel market. In order to deal with the uncertainty and volatility of that industry, companies were implementing a greater number of involvement practices, encouraging employees to take on more responsibility for their work environment. (Bacon and Blyton 2001, p. 13) But at the same time, managers were pursuing cost-cutting strategies, such as job reductions and increased use of contractors, that reduced employees sense of job security.   The result is there was a negative link between involvement practices and commitment in that contextual environment. (Bacon and Blyton 2001, p. 14)

Goulet and Frank also focus on the relationship between context and organizational commitment. They did a comparative study of organizational commitment between employees in the for-profit sector, the not-for-profit sector, and the public sector. They found that for-profit employees had the highest measure of organizational commitment, followed by not-for-profit employees and then public sector employees. (Goulet and Frank

2002, p. 206) This result was opposite of what was expected. Goulet and Frank

hypothesized that the not-for-profit and public sector employees would have higher levels of

commitment because they are motivated more by intrinsic rewards, while for-profit

employees are more motivated by extrinsic rewards and will readily leave an organization to

pursue them. (Goulet and Frank 2002, p. 206) They reasoned that the cause for this

unexpected finding is that the 1990s labor market was tight, and for-profit companies had to

offer attractive compensation packages in order to attract and retain employees. (Goulet and

Frank 2002, p. 207) Conversely, these compensation packages were attractive enough to

lure away not-for-profit and public sector employees as well.   The key point here is that

organizational commitment can be influenced by contextual variables.

Despite these negative aspects of organizational commitment and its contextual

nature, it is useful to analyze the components of commitment by adapting the metaphor of

construct space (Creed, Stout, and Roberts 1993, p. 62). Organizational commitment can be

seen as a larger concept that is composed of different major dimensions, which can be

examined from different levels. The first level of concern deals with what analytical

perspective to approach organizational commitment. These levels could focus on personal

variables or situational variables (Zeffane 1994, pp. 978-979).

Personal variables include such things as individual characteristics, personality traits,

and attitudes that have developed over years of life experiences. Situational variables

include the areas traditionally addressed by organizational scholars. These areas include the

structural relationships of the organization's sub-units and organizational decision-making

processes. The latter variables are the ones of interest to this project.

Thus far, this section has argued that some scholars report that organizational commitment has been associated with certain organizational outcomes, both good and bad. Organizational commitment can be viewed as being made up of the sub-concepts of organizational identification and internalized organizational citizenship behavior. The former represents a minimal approach to organizational commitment while the latter goes deeper and addresses more substantive concerns.

Organizational identification is "the degree to which members define him or herself by the same attributes that he or she believes define the organization." (Dutton et al., 1994, p. 239) This definition relies heavily on the perceptions of the individual, which can be based on psychological or socialized feelings of affection for the organization or in a self-interest based notion of unwillingness to leave the organization due to the "sunk costs" of time invested with the organization. (Roberston and Tang 1995, p. 68)

Other scholars have also identified a similar conceptualization of this level of commitment, but have labeled it differently. Mellor, Mathieu, Barnes-Farrell, and Rogelberg call this concept *continuance commitment*, which is described as "a state where employees are bound to their organization to the extent that they 'have to be' due to the benefits associated with staying versus the personal costs associated with leaving." (2001, p. 173) This type of commitment is characterized by perceptions of few choices and high personal sacrifice. The former refers to the employee feeling there are few alternative jobs available, while the latter refers to an employee's perception that leaving the organization would bring financial hardship or some other type of suffering. (Mellor et al., 2001, p. 173)

Brockner et al., describe this type of minimal behavior as the compliance level of organizational commitment. (1992, p. 244) People stay with the organization or engage in

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organizational change attempts not because they truly believe in the activity, but only because they wish to achieve a reward or avoid some type punishment.

The problem with these minimalist conceptualizations of commitment is that they only address why people stay with an organization and not why they choose to engage in activities that are more innovative or go beyond that which is formally prescribed. Thus another level of conceptualization is needed to address why people go beyond minimally prescribed organizational behaviors.

The deeper conceptualization of organizational commitment is referred to as internalization. (Brockner et al., 1992, p. 244) Here, "people's underlying attitudes are congruent with their supportive behavior, either because they believe in the cause or because they wish to support the individuals enacting the cause." (Brockner et al., 1992, p. 244) The theoretical linkages behind this concept relate internalized organizational commitment to organizational citizenship behaviors. These behaviors are defined as ones "which are not formally prescribed, but yet are desired by an organization." (Schnake 1991, p. 736) These behaviors are discretionary, not formally rewarded and "in the aggregate, promote the effective functioning of the organization." (Moorman 1993, p. 761) Again, Mellor and associates use a similar concept with a different label. They refer to this deeper type of organizational commitment as affective commitment which "describes an alignment that employees feel between their organization and their personal value systems and desires." (Mellor et al., 2001, p. 173).

In essence, this deeper portion of the concept of organizational commitment deals with a type of efficiency. The organization wishes to encourage its members to give more than is formally prescribed, a situation analogous to getting more output for the same input.

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From an organizational theory point of view, the scholar would be interested in the design elements, structures, and processes that would encourage the development of these types of behaviors.

In linking involvement, organizational commitment and organizational effectiveness, Lawler's relationship above can be re-conceptualized as the following two statements:

1) OC = f (P, R, I, K) where:

> P = Power
> R = Rewards
> I = Information
> K = Knowledge
> OC = Organizational Commitment

2) OE = f (P, R, I, K) + f (OC) where:

> P = Power
> R = Rewards
> I = Information
> K = Knowledge
> OC = Organizational Commitment
> OE = Organizational Effectiveness

Lawler's original relationship is not a mathematical expression, but more of a graphical depiction of his conceptualization of the relationship between effectiveness and the interdependent elements of participation (power, rewards, information, and knowledge.) The first statement in the above relationship introduces organization commitment as an intervening variable. Organizational commitment is a function of power, rewards, information, and knowledge. The second statement links the elements of participation and organizational commitment to organizational effectiveness. It addresses the missing link in Lawler's original relationship, which is theorized to be organizational commitment. The

second statement is based on the notion that high involvement practices alone are not enough to lead to organizational effectiveness. Having the elements of participation present at all levels of the organization will not necessarily lead to organizational effectiveness. Effectiveness comes about only if the employees are committed to the organization.

An ill-defined link in the above function is organization effectiveness. This concept did not receive much explicit attention in the original Lawler model, though references are made to higher motivation, worker satisfaction, better decision quality, less resistance to change, higher quality goods and services, and fewer managers. (Lawler 1986, pp. 37-38) Though a comprehensive review of the literature on organizational effectiveness is beyond the scope of this project, a brief review of the recent literature is in order. This will be the topic of the next section.

Organizational Effectiveness

Organizational effectiveness has received a great deal of attention for many years. (Fox 2002; Kearney and Berman 1999; Cameron and Whetten 1983; Wholey 1972; Wildavsky 1972) Despite this focus, the state of the literature on the subject is similar to that of the literature on participatory management. There is no clear conceptualization of what exactly constitutes organizational effectiveness. This makes it difficult to test, measure, and theorize. (Meyer 2002, p. 2; Cameron and Whetten 1983, p. 2; Nord 1983, p. 95)

Determining organizational effectiveness for private sector organizations is more refined. These organizations have clear purposes, such as making a profit, increasing market share, or increasing sales. These goals are clearly definable and easily measured.

But financial based measures of performance have been criticized for focusing too narrowly on one dimension, namely current profit, and ignoring factors that could affect future profits. (Smith 2002, p. 119) Thus the concept of a "balanced scorecard" was developed to address a wider range of performance concerns. (Kaplan and Norton 1996)

Public sector organizations have also been subject to much scrutiny on their performance, even more so than private sector organizations due to their public nature. Public sector organizations have much more difficulty in defining and measuring effectiveness. These organizations have purposes that are not clearly defined nor easily measured. They have no single "bottom line." The balanced scorecard approach to measuring effectiveness appealed to public sector scholars because the concept recognized that organizations need to be evaluated on more than a financial basis. (Fountain, Patton, and Steinberg 2004; Rubenstein, Schwartz, and Stiefel 2003; Kelly and Swindell 2002)

Though the balanced score card approach seemed like an ideal way to measure the effectiveness of public sector organizations, it still has some complicated issues that need to be considered. The literature on performance measures identifies some of these issues.

Meyer makes two conclusions regarding performance measures; measuring performance is difficult and the choice of measures is arbitrary. (Meyer 2002, p. 2)   Meyer also points out that one of the "bedrock issues" to address in using performance measures is the unintended consequence of their becoming merely quotas to fill. (Meyer 2002, pp. 4-5) Meyer implies that when performance measures become "quotas," they no longer serve their intended purpose.

de Lancer Julnes and Holzer write that there are two stages to using performance measures; adoption and implementation. (de Lancer Julnes and Holzer 2001, p. 703)

Adoption involves the development of which measures to use, while implementation involves actually using them. Their research found that most organizations which implemented performance measures did nothing with the data. (de Lancer Julnes and Holzer 2001, p. 694) They propose a two-prong framework for analyzing factors affecting the utilization of performance measures. The two prongs are rational/technocratic factors and political/cultural factors. (de Lancer Julnes and Holzer 2001, pp. 701-702) They conclude that both of these types of factors have to be considered when adopting and implementing performance measures. Performance measures need to be selected based on rational purposes, but political and cultural factors must be considered in deciding if the measures can actually be put into place.

Behn writes that performance measures can be used for multiple purposes and that different people will use them for their own reasons. (Behn 2003, p. 587).   Behn focuses on developing a framework for public managers so they can choose performance measures to match the purpose they are intended to serve. (Behn 2003, p. 588) He provides eight managerial purposes that performance measures serve; to evaluate, to control, to budget, to motivate, to promote, to celebrate, to learn, and to improve. (Behn 2003, pp. 587-593) In choosing performance measures to meet these managerial purposes, Behn states that there is no one best performance measure, each one needs a gauge and consideration of the context surrounding its use. (Behn 2003, p. 598)

Reisinger, Cravens, and Tell credit the balanced score card approach for diverting some attention away from financially based measures of performance to non-financial ones, but the development of non-financial indicators can lead to an overwhelming amount of information, much more than people could reasonably be expected to process.

(2003, p. 430)   They advocate an analytic framework where measures are reviewed periodically so different measures can be prioritized as the need arises. (Reisinger et al., 2003, p. 436) They key feature of this analytic framework is a pairwise comparison so a decision maker only has to consider two measures at a time. (Reisinger et al., 2003, p. 432)

Nicholson-Crotty, Theobald and Nicholson-Crotty write that although no single measure is adequate to capture any organization's performance, when managers choose multiple measurements they must do so carefully. Their choices on what performance measures to use can affect the identification of problems, the identification of the cause of problems, and if solutions employed are actually working. (Nicholson-Crotty, Theobald and Nicholson-Crotty 2006, p. 101) In looking at various measures of the drop out rates of various Texas school districts, they make two conclusions. Their first conclusion is that researchers must carefully consider the complexities of multiple measures. (Nicholson-Crotty, Theobald and Nicholson-Crotty 2006, p. 110) They suggest that a closer match between measurement strategies and organizational characteristics may provide more useful information. (Nicholson-Crotty, Theobald and Nicholson-Crotty 2006, p. 110)   In their second conclusion, the Nicholson-Crottys and Theobald state that it is unwise for each set of political principals to measure performance differently. (2006, p. 110) This situation can send out conflicting signals on performance. They cited the instance where one school district scored high on state measures of drop out rates but low on federal measures. (Nicholson-Crotty, Theobald and Nicholson-Crotty 2006, p. 108)

Coe and Brunet researched the use of report cards, which are defined as regular efforts by one organization to collect data on other organizations for the purpose of communicating information on performance. (Coe and Brunet 2006, p. 90) They conclude that all report cards are not equal, as some are based in good science while others are designed to promote a particular point of view. (Coe and Brunet 2006, p. 98) They identified four categories of report card issuers: government, commercial enterprises, academics, and public interest groups. (Coe and Brunet 2006, pp. 91-92) They concluded that each type hoped for a different impact. Government-generated report cards are directed at increasing consumer choice while commercial enterprises' report cards were designed to stimulate sales. (Coe and Brunet 2006, p. 97)   Report cards issued from academic groups tended to be value neutral, while public interest groups' report cards sought to advance their position. (Coe and Brunet 2006, p. 97)

In summary, the literature on effectiveness is disjointed and not very cohesive. Despite repeated calls to hold organizations accountable for results, especially in the public sector, academic scholars have not agreed upon a theory of effectiveness. A topic receiving a lot of academic attention is the use of performance indicators. Intuitively, the use of multiple performance measures makes a great deal of sense, but deciding which measures to use, which measures can be implemented, and what to do with the information collected has been problematic.

This section has identified Lawler's model of high involvement organizations as a place where the literature on participation, empowerment and involvement comes together. His model states that the elements of participation, which are power, rewards, information sharing and knowledge, must be present throughout the organization in order

for it to be effective. There are two areas the model does not specifically address. First is why does the combination of power, rewards, information sharing and knowledge lead to effectiveness? Second, what is meant by effectiveness?

To address the first question, this project adds the concept of organizational commitment. It is proposed that the organization will become more effective if the elements of participation creates an atmosphere for members to develop a deep sense of commitment to the organization and perform at the highest levels. To address the second question, the concept of a "balanced scorecard" was introduced as a method to measure organizational effectiveness. Having a variety of performance measures allows an interested party to get a broader view of effectiveness, one from many different perspectives; but the process is not without problems. Multiple performance measures are especially important for organizations that have multiple outcomes that cannot be easily quantified and measured, but care must be taken in selecting the performance measures. Multiple performance measures can send mixed signals or be designed to promote a particular point of view. A final question that arises in this literature review is what kind of organization could or should this model be tested on? Institutions in the higher education sector are generally managed in a more participative manner than other organizations. The next section will describe the governing model used in the higher education realm and then discuss why higher education is a good fit for this study.

Governing Institutions of Higher Education

Institutions of higher education are unique organizations. The above literature review discussed various perspectives on participation, empowerment and involvement.

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The recurring theme is the transfer of decision-making authority from higher levels of management to other members of organization. This transfer is still controlled primarily by management under many circumstances. The role of other members of the organization is restricted to accepting whatever level of decision-making authority management wants to cede. The realm of higher education is quite different. Members of the faculty not only expect, but demand to share in the management of the institution. This situation developed because of the nature of higher education. The next section will review characteristics of higher education organizations. This will be followed by a discussion on the concept of shared governance.

Characteristics of Higher Education Organizations

The United States has hundreds of higher education institutions. These organizations can range from two year community colleges to the prestigious universities of the Ivy League. Though they differ on many dimensions, certain basic, common characteristics can be identified. These characteristics are environments filled with challenges, the presence of multiple stakeholders, and a multiplicity of organizational purposes.

Colleges and universities are faced with a litany of challenges. These challenges include issues such as public skepticism and calls for accountability (Austin 2002, pp. 121-123; Kezar and Eikel 2002, p. 435; Cohen and March 1986, p. xii), fiscal constraints (Austin 2002, pp. 121-123; Kezar and Eikel 2002, p. 435), the need to compete for students, control costs and find new sources of revenue (Giroux 2002, p. 442), determining the classroom role of information technology innovations (Austin 2002, pp.

121-123; Kezar and Eikel 2002, p. 435), dealing with an ever-increasing diversity of students (Austin 2002, pp. 121-123), changing demographics, competing values (Kezar and Eikel 2002, p. 435), and an increasing emphasis on learning outcomes (Austin 2002, pp. 121-123). The list could go on and on. It would be sufficient to say that the managers of institutions of higher education have more than enough challenges to address. Why is this situation so? It could be argued that these challenges arise from the fact that colleges and universities have a multiplicity of stakeholders, each with his or her own unique perspective on what is expected from the institutions.

Colleges and universities, even ones considered to be "private" institutions, are very public organizations in the sense that they are under scrutiny from various segments of society. Several of these groups deal directly with colleges and universities, yet many interested parties need not have a direct relationship with the institutions. Examples of stakeholders with direct dealings with colleges and universities include students (Menon 2003, p. 233; Koch 2003, p. 331), faculty (Menon 2003, p. 233; Koch 2003, p. 331), administrators (Menon 2003, p. 233), parents (Menon 2003, p. 233; Koch 2003, p. 331), trustees, private financial supporters, and accreditation bodies. (National Commission on Accountability in Higher Education 2005, p. 11) Examples of stakeholders with indirect dealings with colleges and universities include, employers (Menon 2003, p. 233; Koch 2003, p. 331), alumni (Koch 2003, p. 331), sports fans (Koch 2003, p. 331), fine arts supporters (Koch 2003, p. 331), and governmental policymakers (Menon 2003, p. 233; Koch 2003, p. 331). Again, the list of stakeholders could go on and on, but the point to make is that colleges and universities have a multitude of stakeholders. A consequence of having a large number of stakeholders interested in an organization, especially one that

produces public goods such as education and research, is that there are varying perspectives on the purpose of the organization.

When examining the multitude of purposes of institutions of higher education, two categories can be used. The first group of purposes can be labeled practical and the other can be labeled ideal. The practical category includes purposes such as producing credit hours, granting degrees, increasing the earnings power of its graduates, producing research for a specific purpose, supporting the arts or producing winning athletic teams (Koch 2003, p. 331). These purposes are instrumental in nature. Stakeholders who ascribe to these views consider colleges and universities to be mere factories producing a good to be used in a specific process. For instance, some students and parents may think that the purpose of higher education is to provide job training so the student can increase their lifetime earnings potential. Other stakeholders may view colleges and universities as a breeding ground for the next generation of artists or professional athletes.

Purposes that fall in the ideal category are ones that aspire to a higher-level, common good. Giroux states that role of higher education is to act "as an essential sphere for expanding and deepening the processes of democracy and civil society." (Giroux 2002, p. 432) He writes that colleges and universities should not develop workers for the labor market, but should educate "students for the demands of leadership, social citizenship, and democratic public life." (Giroux 2002, p. 433) Kezar states that while universities have benefited from closer connections to economic and market-based goals, universities cannot abandon social development, social justice, and democratic engagement. (Kezar 2004, p. 430) Bailey concurs with Giroux and Kezar and writes that colleges and universities should act in accordance with two guiding values,

disciplined thought and the civilized treatments of others. (Bailey 1980, p. ix)   Bailey

goes so far as to state that when colleges and universities stray from these values, "they

set loose a powerful and sinister cynicism that erodes and corrodes the enveloping

society." (Bailey 1980, p. ix)

Colleges and universities are faced with numerous challenges in their

environment and are under scrutiny from multiple stakeholders, each of whom may have

different perspectives on the role of higher education. Environmental changes and

stakeholder pressures can cause colleges and universities to periodically re-focus their

attention and re-evaluate the directions their institutions are taking. (Cohen and March

1986, p. xii)   How does an institution deal with such a myriad of pressures? How does

one vision of higher education take precedence over another?   These questions delve into

the heart of how a university sets strategic policy.   In order to sort through all these

pressures, colleges and universities have traditionally relied on the concept of shared

governance. The next section will discuss this concept in greater detail.

The Concept of Shared Governance in Higher Education

Shared governance has a preeminent place in the management of colleges and

universities.   It is considered to be a cornerstone of university management (Koch 2003,

p. 330), a central tenet of good governance (Hartley 2003, p. 924) and a historical given

(Hamilton 2002, p. 21).   The next two sections describes what shared governance is and

why it is necessary in the higher education environment. This will be followed by a

comparison of advantages and disadvantages of this form of governance. And finally, a

characterization of the decision-making environment under shared governance will be presented.

At a basic level, shared governance address two simple questions. Who decides and what areas do they decide? (Minor 2004, p. 41)   Minor defines governance as "the configuration of decision-making bodies" where the "organization of governing bodies can vary significantly from campus to campus." (Minor 2004, p. 41)   Del Favero writes that shared governance occurs when "faculty and administrators join together to balance power and interests." (Del Favero 2003, pp. 902-903)   Clark states that shared governance occurs when "students, faculty and staff at all levels are involved in the processes through which decisions impacting all areas of the university are made." (Clark 2003, p. 56)   The difference between the Del Favero and Clark's view of shared governance is the inclusion of students. Meno justifies the inclusion of students because "participation is viewed as an expression of the ideal democracy embodied in the notion that all stakeholders must be granted an equal voice in decision-making." (Meno 2003, p. 237)   She further states that "given the importance of higher education for the subsequent well-being of graduates, students are entitled to a voice in decision-making that concerns their own future." (Meno 2003, p. 237)   Giroux agrees with giving students a voice in the governance of higher education. Colleges and universities are places "where students gain a public voice and come to grips with their own power as individual and social agents." (Giroux 2002, p. 432)

Checkoway casts a wider net when identifying the participants in shared governance and writes that universities are drifting away from the "civic mission to prepare students for active participation in diverse democracy and develop knowledge for

the improvement of communities." (Checkoway 2001, p. 125)   His plan to renew civic

pride in higher education is based on more community involvement in decisions such as

designing curricula, establishing research agendas, and infusing the idea of civic-

mindedness in all institutional units and in all institutional decisions. (Checkoway 2001,

pp. 133-138)   These different perspectives on shared governance vary in terms of who

the players are, but they are similar in that they are predicated on the expansion of

participants in decision-making processes. The inclusion of more participants in

decision-making makes shared governance an organizational necessity in college and

university environments, as many different perspectives must be reconciled.

Given that shared governance expands the number of participants in the decision-

making processes at higher education institutions, the next question addresses what types

of decisions are made. As discussed below, each participant at the table will bring

different skill sets based on their background and training. (Ferren and Stanton 2004, p.

4) In some areas, there are clear boundaries between the bureaucratic authority of

administrators and the professional authority of faculty. (Blau 1994, p. 159) For

example, accounts receivable collection policies or snow removal procedures are

generally not challenged by other decision-making participants. Higher level policy and

strategic decisions are the ones other participants at the table will expect to have input.

One of the primary areas of concern to faculty relates to issues of academic freedom.

Academic freedom is defined as "full freedom in research, publication, and classroom

discussion" where scholars are "free from institutional censorship or discipline related to

their speech and publication." (Hamilton 2002, p. 21) Faculty demand the freedom to

determine the content of courses taught, and the nature of research (Koch 2003, p. 329),

promotions, evaluation, and tenure (Ferren and Stanton 2004, p. 16; Koch 2003, p. 330) and the role of adjunct professors. (Minor 2004, p. 41) They also demand a voice in campus-wide issues such as the use of technology in the classroom, the validity/invalidity of distance education, campus diversity (Minor 2004, p. 41; Koch 2003, p. 328), and the level of university involvement in economic development (Koch 2003, p. 328).

Faculty demands to participate in the governance of their institutions are rooted in academic values, which are transmitted to faculty members as they come up through the ranks in their respective professions. Administrators also have values that are transmitted to them during their education and work experiences. Other participants in the shared governance process will be influenced by their background and experiences as well. These different backgrounds produce different views on the operation of higher education institutions and these different views are reconciled through the shared governance process.

Colleges and universities are academic communities that have shared professional norms and values. (Hartley 2003, p. 924) These values are reflected in statements regarding the mission of colleges and universities such as "preparing students for active participation in a diverse democracy and to develop knowledge for the improvement of communities" (Checkoway 2001, p. 125) or "advancing knowledge through research, developing the arts and humanities….and intellectual talents of students, and creating leaders for various areas of the public sector." (Kezar 2004, p. 430)   Wals and Jickling quote Tony Cortese as stating that higher education institutions "have the unique freedom to develop new ideas, comment on society, and engage in bold experiments, as well as to contribute to the creation of new knowledge." (Wals and Jickling 2002, p. 224)   Most of

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these quotes come from academic journals, whose authors are, for the most part, faculty members. Ideas such as freedom, democracy, inclusiveness, knowledge and public service are recurring themes when faculty refer to the purpose of universities.   These values are transmitted to faculty through their academic training and define their view of higher education. Administrators have different experiences and training. Skill sets are different for academics and administrators. (Ferren and Stanton 2004, p. 4) These differences in orientations, which are rooted in the division of labor, breeds distinct responsibilities, areas of expertise, and perspectives. (Hartley 2003, p. 924) Shared governance is a structural solution for reconciling the differing perspectives between administration and faculty.

Most colleges and universities employ a division of labor, as evidenced by the establishment of various academic departments and administrative offices. Faculty tend to be autonomous, and their allegiance is to their discipline. On the other hand, administrators' allegiance is to the institution, with rewards tied to institutional performance. (Del Favero 2003, pp. 904-905)   As stated above, there are a multitude of stakeholders who are interested in colleges and universities. Also stated above are the multitude of ideals upon which college and universities are founded. These two perspectives can be diametrically opposed. (Menon 2003, p. 235) For instance, administrators are the ones who have to search for ways to control costs and generate revenues, often in responses to stakeholder demands from student, parents, and policymakers.   One way of controlling costs would be to cut an academic program that does not have much demand. A way to produce revenues may be to encourage a corporation to endow a chair. From an administrative point of view, this makes sense.

From the academic side, the elimination of a program may marginalize an underrepresented group. The endowment of a chair by a corporation may cede control over the content of the courses taught. Shared governance is, in theory, a way to negotiate decisions that accommodate multiple perspectives. In reality, shared governance has its positive points and its negative points.

One of the positive characteristics of shared governance is its normative base in democratic principles, a value many scholars cite as being central to colleges and universities (Kezar 2004, p. 430; Giroux 2002, p. 432; Wals and Jickling 2002, pp. 224-225; Checkoway 2001, p. 127). Participation in decision-making is an expression of democracy (Menon 2003, p. 237) Regardless of its form, the inclusiveness of shared governance adds to the legitimacy of decisions. (Hartley 2003, p. 943)

Another positive characteristic of shared governance is rooted in practicality. Several scholars credit the shared governance process with producing decisions that possess qualities that are desirable from an organizational point of view. Menon states that participation in meaningful decisions can reduce conflict and increase likelihood of acceptance of decisions and commitment to goals. (Menon 2003, pp. 238-239)   Ferren and Stanton write that "genuine participation in decision-making leads to better decisions, broader agreement, and fuller commitment." (Ferren and Stanton 2004, p. 16) And Hartley declares that shared governance works when participation is broadly based, makes substantial decisions and has procedural impartiality (Hartley 2003, pp. 940-942)

On the negative side, shared governance has some undesirable qualities. The introduction of so many different, often conflicting, points of view into a decision-making process is bound to introduce conflict as well. This makes reaching a consensus

difficult. (Menon 2003, p. 243)   Another aspect of governance by consensus is its inability to accommodate radical, "outside the box" thinking which could lead to innovative solutions to problems. (Menon 2003, p. 244) Lastly, organizational inertia makes new initiatives difficult to implement and at the same time makes it difficult to stop ones that are already in motion. (Koch 2003, pp. 325-326; Cohen and March 1986, p. 206)

On the surface, the organizational structure of many colleges and universities resemble a traditional hierarchy. A typical organization chart may be topped by a president who reports to some type of governing board, such as a Council of Trustees. Beneath the presidents are various academic and administrative vice-presidents, and beneath them are the various departments, usually based upon some type of specialization of labor. But the concept of shared governance ensures that top-down decision-making is not the norm. Cohen and March describe universities as "organized anarchies" because they have problematic goals, unclear processes, and fluid participation of members. This makes universities difficult to describe, understand, and lead. (Cohen and March 1986, p. 3)   Checkoway describes research universities as a "loosely coupled federation of decentralized units dominated by academic departments and professional schools" where "disciplinary communities and professional peer groups" are the primary source of faculty identification. (Checkoway 2001, p. 138)   Since colleges and universities have unique environments and shared governance structures, many "axioms and standard procedures of management collapse." (Cohen and March 1986, p. 4)   Koch states that successful private sector management techniques, such as Total Quality Management, fail

in higher education because of its unique nature and distinctive culture. (Koch 2003, p. 330)

It would be inaccurate to assume that all constituencies at all colleges and universities are satisfied with their degree of influence over their institutions. Minor lays out a continuum of shared governance that ranges from collaborative to consultative. (Minor 2004, p. 41) On the collaborative end of the scale, university constituents collectively make decisions regarding the direction of the institution. (Minor 2004, p. 41) At the consultative end, administration reserves the right to make decisions, though they may consult with other constituencies. (Minor 2004, p. 41) The context surrounding each university must be considered when assessing the degree of shared governance. (Minor 2004) If there is a history of acrimonious relations between administration and faculty, then the possibility of achieving a truly collaborative governance is severely hampered.

Today, many in the academic community feel that shared governance has come under attack on various fronts. Greater calls for university accountability occur because many feel that shared governance is too slow to react in a competitive environment. (Hartley 2003, p. 924; Austin 2002, p. 121) Universities and colleges are not only competing for students, but for governmental resources in the form of direct subsidies, research grants and financial aid awards and for private donations as well. Many of these resource providers want to see some sort of accounting of the resource they provide, which may often have some type of use restriction associated with it.

Another threat to shared governance comes from the "corporatization" of higher education. In the never-ending search to find new resources, administrators of higher

education institutions are increasingly turning to the private sector, especially the corporate sector. (Kezar 2004, p. 430-432; Menon 2003, p. 233; Giroux 2002, pp. 432-437). As these private resources flow into universities and colleges, the restrictions with those funds may displace decision-making by shared governance. Giroux contends that:

> Within this corporatized regime, management models of decision making replace faculty governance. Once constrained by the concept of shared governance, administrators in the past decade have taken more power and reduced faculty-controlled governance institutions to advisory status (Giroux 2002, p. 438)

Funding for an endowed chair or funds for a specific research purpose may take decisions out of the hands of faculty and into the hands of private influences.   The corporation funding a chair may demand some influence over who is selected for it and what activities they pursue. (Giroux 2002, p. 436) Private funding of a specific research purpose may produce research done for commercial gain as opposed to producing knowledge for the common good. (Kezar 2004, p. 441)

In summary, colleges and universities are institutions that have multiple stakeholders, which breeds different perspectives on the purpose of higher education. The traditional method used to reconcile these diverse expectations of institutional actions is shared governance. This method of governance expands the circle of decision-making participants to include groups other than the university management team. Though there is no standard configuration of decision-making participants, the usual players involved in decision-making include the university president, vice presidents, deans, faculty, boards of trustees, and students. (Blau 1994, p. 178) There is also variation in the relative power between these players. Blau points to research done by Gross and Grambsch on large universities that indicates the president and the board

typically are the most powerful. (Blau 1994, p. 178) Blau also states that the distribution

of decision-making authority is affected by the size of the institution. His research

findings, contrary to popular thought, found that larger universities were less bureaucratic

in the sense they have relatively smaller administrative apparatuses and as a result had

more academic decision-making decentralized to the individual departments. (Blau 1994,

p. 185)   The shared governance model is an ideal type to strive for, but in reality, there

can be disagreement over the actual degree of participation each of the players actually

have, and in some situations, the campus environment can be quite acrimonious.

(Hamilton 2002)

Shared Governance and Involvement Management

Shared governance in higher education can be viewed as a type of participatory

management program. As with other participatory systems, it can be examined using the

continuum constructed above. Shared governance can range from limited participation in

limited matters to empowered employees given authority to make decisions in restricted

areas, to fully involved employees with the authority to act in a wide range of capacities.

Like the shared governance model in higher education, Lawler's vision of a high

involvement organization is an ideal type. He states that it cannot be drafted onto an

existing bureaucratic organization, due to the integrated nature of the power, rewards,

information and knowledge systems of the involvement organization. It must be applied

to an entire organization, even if it means rebuilding from scratch. (Galbraith and Lawler

1993, pp. 298-299)

As stated in Chapter 1, Lawler's research focuses on private sector organizations, and is based on the assumption that those organizations are still primarily designed under traditional bureaucratic command and control principles. Higher education organizations are, in theory, based on the assumption that governance is shared at least between the university management and the faculty. Lawler states that the key to high involvement organizations is to have power, rewards, information and knowledge permeate all levels of the organization. (Lawler 1996b, pp. 31-32; Galbraith and Lawler 1993, p. 181; Lawler 1986, p. 22) If Lawler's assertion is valid, and if higher education organizations are more participative by nature, then it would be expected that employees of colleges and universities would have similar views on the distribution of power, rewards, information and knowledge. The realm of higher education provides a different class of organization to apply Lawler's model. This realm is more participative in nature than the business sector and can be used to validate the application of Lawler's model to a wider range of organizations.

Chapter Summary

This chapter started with a review of the criticisms of the traditional bureaucratic-mechanistic form of organizing and a summary of the driving forces that changed thoughts on organizing. The literature revealed that some degree of participation in management decisions by employees was identified as a way to alleviate some of the ills of bureaucracy. The literature on participatory management is disjointed and inconsistent, with the concepts of participation, empowerment, and involvement being used interchangeably in some cases and discretely in others. Lawler's High Involvement model was identified as a starting point for solidifying the literature. Organizational

commitment literature was reviewed and offered as an addition to Lawler's model; serving as a link between involvement management and organizational effectiveness.

The literature on organizational effectiveness was also reviewed. It revealed that a current topic receiving a lot of attention is the use of multiple performance measures by public sector organizations. Though it makes intuitive sense to use multiple measures for public sector organizations, which lack clear, generally agreed upon common measures like profitability, there are problems identified in selecting appropriate indicators. The literature on higher education organizations revealed that, unlike the private sector, shared governance is expected, even demanded by the university community. This unique feature makes the higher education sector more participative in nature than the private sector and may represent a way to validate some of the assumptions underlying Lawler's High Involvement model. The next chapter will build upon this literature review and pose some research questions for further investigation.

CHAPTER 3 – RESEARCH QUESTIONS AND METHODOLOGY

The previous chapter presented a literature review that covered topics such as the

shortcomings of traditional forms of organizing, participation as a solution to those

shortcomings, organizational commitment, multiple performance indicators as measures

of organizational effectiveness and the governance of higher education institutions.

Building upon the previous chapter, this section will identify some research questions and

then develop some hypotheses designed to answer those questions. A model is

constructed to guide research into the relationship between involvement management

practices, organizational commitment, and organizational effectiveness.

Research Questions and Hypotheses

The literature review above highlights a progression of ideas on how to address

the ills of the traditional bureaucratic-mechanistic form of organizing. The initial

intellectual spark began with participation, which leads to empowerment and then

ultimately to involvement. This progression reflects the expansion of thought from the

simple idea of soliciting employee opinion on limited job related matters to the integral

involvement of employees in substantive organizational decisions and processes.

Confusion resulted in the literature in large measure because there was inconsistent

conceptual treatment of the ideas of participation, empowerment, and involvement. Some authors treated the concepts as being unique, where as others made no distinction between them. Lawler's High Involvement model serves as a starting point for solidifying the involvement construct. He argues that the nucleus of any participative program is based upon the elements of power, rewards, information and knowledge. The hallmark of an effective participative program is the presence of these four elements throughout all levels of the organization, a condition he referred to as high involvement.

The literature review above also reveals that there is a plethora of positive organizational outcomes hypothesized to result from participation, empowerment, and involvement practices, though much of the research focuses on productivity and job satisfaction. Lawler theorizes that through the use of involvement techniques, employees will develop feelings of power, rewards, information, and knowledge that will permeate all levels of the organization and as a result, the organization will be more effective than similar organizations that do not employ such practices. This raises some interesting questions. Why will the high involvement organization be more effective? Will the difference in effectiveness be attributable to having more committed employees? Lawler's model does not explicitly address the role of organizational commitment, which opens a new avenue of research. The broader research question deals with investigating the relationship between involvement management practices and organizational commitment and how these variables impact organizational effectiveness. Three specific research questions and three testable hypotheses are formulated to address the broader research question.

Research Question 1 – Linking Involvement Practices to Perceptions

The first research question is concerned with investigating the link between high involvement practices and Lawler's elements of participation.

Research Question 1 – As the number of involvement practices increase, will there also be increases in employee feelings of having power, rewards, information, and knowledge?

In order to test the involvement-commitment-effectiveness relationship, the first step is to examine the link between the number of involvement practices and employee perceptions of having power, being rewarded, being informed, and possessing knowledge. The practices employed will be expected to produce certain patterns of employee feelings. This is restated in the form of a testable hypothesis as:

Hypothesis 1 - Organizations with a greater number of involvement practices will have employees with higher perceptions of power, rewards, information and knowledge in all organizational units.

Research Question 2 – Linking Involvement to Commitment

The next research question addresses the link between the patterns of employee perceptions of participation and organizational commitment. A high involvement pattern of power, rewards, information, and knowledge is one in which most employees at all hierarchical levels perceive themselves as having power, rewards, information, and knowledge. The second question addresses the relationship between these patterns of perceptions and employee commitment to the organization.

Research Question 2 – Does the sharing of power, rewards, information, and knowledge result in employees being more committed to the organization?

This second research question addresses the next link in the involvement-commitment-effectiveness relationship. Specifically, a hypothesis is developed to test the relationship between employee perceptual patterns of high involvement and feelings of organizational commitment. The hypothesis is stated as:

> *Hypothesis 2* – *Organizations whose employees have higher perceptual levels of power, rewards, information and knowledge will have higher levels of organizational commitment.*

Research Question 3 – Linking Involvement, Commitment, and Effectiveness

The third research question addresses the final link in the high involvement-commitment-effectiveness relationship. The first research question addressed the relationship between the numbers of involvement management practices and employee perceptions of involvement. The second research question addressed the relationship between employee perceptions of involvement and organizational commitment. The final question is designed to uncover any systematic relationships between perceptions of involvement, levels of commitment and organizational effectiveness.

> **Research Question 3 – If power, rewards, information and knowledge is distributed through all organizational units and employees are committed, will the organization be more effective?**

A hypothesis can be designed to test the relationship between perceptual patterns of involvement, levels of organizational commitment and organization effectiveness. It is expected that an organization with employees who see themselves as involved in a wide array of processes and decisions, will have higher levels of commitment. The more these perceptions are present throughout all levels of the organization, the greater the likelihood of developing wide spread commitment. Widespread organizational

commitment provides the motivation for employees to perform at higher levels and thus

increase the overall performance of the organization. Organizational performance

increases because the employees are well informed about the organization, have

knowledge about organizational processes, have the power to make decisions, and are

rewarded for achieving organizational goals. The hypothesis can be stated as:

> *<u>Hypothesis 3</u> – Organizations with higher perceived levels*
> *of involvement and organizational commitment in all*
> *organizational units will have higher levels of effectiveness.*

Based on the research questions and hypotheses above, a conceptual model was

constructed to provide a framework to guide the research process. The next section will

describe the details of this model.

Construction of the Research Model

In summary, so far this chapter proposed a series of research questions and

hypotheses to test an involvement-commitment-effectiveness model built upon Lawler's

work on high involvement with the added twist of explicitly linking it to commitment.

The nexus of involvement practices and organizational commitment is hypothesized to

lead to higher levels of organizational performance. This relationship is depicted

graphically by Figure 3.1 below. The diagram starts on the left, where there are high

involvement practices (HIP) which are applied to the organization at all levels. The box

labeled "organization" is comprised of a variety of hierarchical levels, from 1 (the top) to

N (the bottom). The application of HIP to the various organizational levels results in

high perceptions of power, rewards, information, and knowledge at those levels.

Employees will feel they have the necessary information about the organization's

environment, along with the knowledge of how organizational processes work together, to make decisions they are empowered and rewarded to make. As a result, they will be committed to the organization and will be highly motivated to make sure the organization achieves its goals. Thus organizational effectiveness will be high.

Figure 3. 1 – The Involvement-Commitment-Effectiveness Model
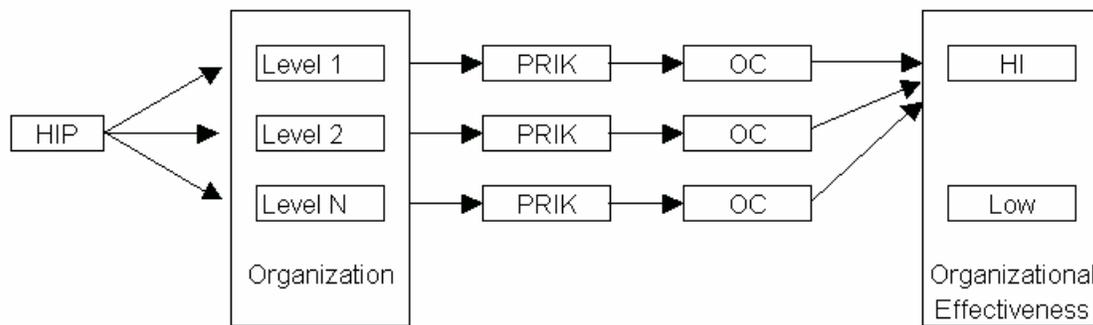
HIP = High Involvement Practices
PRIK = Perceptions of Power, Rewards, Information, and Knowledge
OC = Organizational Commitment

This section provided background on the conceptual model used in this study along with the research questions posed and the hypotheses developed to address those questions. The balance of the chapter will go over the general research design, the population studied, and the methodological procedures employed. It will also contain a discussion on how components of the model were operationalized.

General Research Design

The design utilized in this research project is a cross-sectional analysis of four similar organizations. The analysis is a two-fold approach; one approach is based on making comparisons between and among the four organizations, the other approach is based on making comparisons between groups of employees. Organizations that have similar contexts will facilitate comparisons by minimizing environmental differences that may affect the data. (Goldenberg 1992, pp. 272-274; O'Sullivan and Rassel 1989, pp.48-50) An ideal situation would be to have a group of organizations which operate in a similar environment and are held to identical standards of performance, yet have some degree of autonomy to decide how best to obtain those standards. The organizations selected for this project are from the same country, the same geographic region, the same industry and are of similar size. These organizations also report to the same superior organization.

Randomly selected employees of these organizations were surveyed to assess their perceptions regarding the elements of involvement (power, rewards, information, and knowledge), and their commitment to the organization. Data on effectiveness are obtained from performance indicators common to all four organizations. The data collected were then analyzed in order to evaluate the relationships hypothesized above. Based on that evidence, some statements will be made about the data set in general. The next section will describe the population used in this research project.

Population Studied

The population chosen to study the research questions above is the governmental unit of a Northeastern state of the United States charged with managing all of the state owned institutions of higher education. This higher education unit was created by a legislative act that transferred responsibility for all the state-owned colleges from the executive branch to a newly established independent agency. The law provided for a Governing Board and a Chief Executive to manage the agency. The agency currently consists of over a dozen universities that are geographically dispersed around the state. As a whole, this higher education agency employs over 10,000 people and serves over 100,000 students. As a condition of participating in this study, the governmental unit wished to remain anonymous.

This higher education agency (hereafter referred to as "the Agency") was chosen to be the study population because of its unique configuration. Each university has a degree of autonomy in decision-making, while other decisions are made at the Agency level. For example, tuition rates are set at the Agency level by the Board, while other revenue decisions, such as room and board rates, are made at each university. Another example relates to staffing, where the Agency may place an overall complement cap on the number of positions a university has, but each university has the discretion to hire whomever they please. Although the component universities vary in terms of students enrolled, staffing levels, academic programs offered, financial resources, and political pressures, they are also faced with many areas of common concern. These common concerns include governmental funding of higher education, finding quality students, and monitoring accountability requirements. In addition to common concerns, all

universities within the Agency are measured by common performance criteria. The Agency uses 24 performance indicators covering topical areas such as student retention/graduation rates, finances, and the diversity of students and employees.

On the whole, the Agency provides the opportunity for comparisons between organizations that are facing a similar contextual environment (i.e. operating in the same state, competing for the same students). This will assist in controlling for some environmental factors that otherwise may affect the relationship between high involvement management strategies and employee perceptions of participation and organizational effectiveness.

Though methodologically desirable, surveying randomly selected employees from all of the universities under the Agency's jurisdiction was not possible. Due to political approvals and budgetary constraints of this research effort, only four universities were used in this study. In order for this project to have commenced, several levels of political approval had to be secured at the Agency level. These include Agency level senior managers and senior union leaders. In addition, each president had to approve the participation of his or her individual university. Several university presidents chose not to allow their employees to participate in this project. As a result of these political approval limitations, four presidents agreed to allow their universities to take part in this research effort. The use of four universities was deemed by the principal investigator to be within available resources. Furthermore, as an additional condition of participating in this project, the Agency required that the actual names of the universities not be used. Hereafter, the universities will be identified as University A, University B, University C, and University D.

The four universities were selected based on similarity in terms of numbers of students served and number of employees. The universities are in the middle range of all Agency universities as measured by the number of students and employees. Table 3.1 presents a comparison of the four universities on some selected student, employee, and financial characteristics to illustrate their similarities.

Table 3. 1 - Comparison of University Characteristics

Characteristic	University A	University B	University C	University D
Undergraduate Students	5,855	5,409	6,991	6,579
Graduate Students	566	1,144	1,007	1,074
Number of Faculty	310	273	353	314
Number of Other Employees	398	372	559	432
Revenues	$58,850,000	$54,441,000	$70,635,000	$64,858,000
Total Assets	$73,132,000	$76,770,000	$100,492,000	$107,775,000

Source: University web sites and financial statements.

Methodology

In order to test the hypotheses, data were collected that measure organizational effectiveness, the number of involvement practices utilized by each university, employee perceptions of involvement (i.e. knowledge, rewards, information, and power) and organizational commitment. Research methods used to collect this information include analysis of agency records on performance and surveys administered to employees.

Ascertaining the levels of involvement practices and employee perceptions of involvement was accomplished through the use of two survey instruments. One survey was administered to a random sample of faculty and support staff employees at each university to gauge their perceptions of involvement. Another survey with the same

questions, plus a section on involvement practices, was administered to the sample of administrative employees. This survey measured administrators' perceptions of involvement and their perceptions of how many involvement practices are used at their institution.   A key tenet of Lawler's model is that involvement must be experienced by members throughout all levels of the organization. Thus, some sort of analytical grouping must be developed in order to approximate the spread of perceptions throughout each university. The next section will discuss this analytical grouping.

Employee Groups

The Agency consists of over a dozen universities that in total employ approximately 10,000 individuals (excluding students.) A key element of this research project is to compare responses to the survey questions, both among employees and among universities. Thus an analytical strategy must be designed that will allow for adequate estimation of scores for all groups of employees at each campus location. A strategy is needed that is also based on random sampling.

The Agency is composed of a variety of unionized and non-unionized employee classifications. Membership in one of several unions serves as a way to group employees to approximate the spread of perceptions throughout the organization.   For purposes of this study, employees are placed in one of three distinct categories at each of the universities based on union membership. The first group will contain members of the teaching and research faculty combined with the athletic coaches, all of whom are in the same union. This employee grouping was labeled as **Faculty**.   The second group consists of the members of professional, maintenance, and clerical unions. This

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grouping was classified as **<u>Support Staff</u>**. Members of the administrators' union, as

well as the few administrators represented by the faculty union, could have been

classified separately as Unionized Administrators, but the resulting group was not of

sufficient size to permit adequate comparison and analysis among and between the

universities. Therefore, unionized administrators were grouped with the individuals

classified as non-unionized managers. It is reasonable to do this because the people in

this grouping are responsible for the management of a large percentage of university

departments and programs. This third grouping of unionized administrators and non-

unionized managers was labeled as **<u>Administrators</u>**.

Operationalization of Involvement Practices, Employee Perceptions of Participation, and
Organizational Commitment

Employee perceptions of participation and organizational commitment will be

measured using a survey instrument developed by the Center for Effective Organizations

at the University of Southern California (CEO). The survey was previously used by CEO

as part of a consulting engagement involving a large, nationally known food processing

corporation. Staff members at CEO indicated that statistical analyses were no longer

available for this particular survey. The original survey developed by CEO was 13 pages

long and was deemed to be too long for a survey administered through the mail. Lengthy

mail surveys are found to be detrimental to response rates, therefore a balance had to be

found that would gather the needed information without over-burdening the respondent

with a great deal of questions. (O'Sullivan and Rassel 1989, p. 148; Clover and Balsley

1984, pp. 172-171) Accordingly, some sections of the original survey were deleted. The

adapted survey contains those questions designed to measure employees' overall

perceptions of commitment as well as perceptions of participation (information, rewards, power and knowledge.) The survey will also collect some demographic data for descriptive purposes.

The original survey from CEO contained a section on rewards, and the questions within were designed to gauge employee perceptions on pay satisfaction and relative pay equity with others. This section was objected to by one of the unions representing Agency employees because it dealt with sensitive pay-related issues during ongoing collective bargaining agreement negotiations. In order to gain the union's approval of the research project, the section on rewards was revised by replacing the term "pay" with the term "promotional opportunities." This action is justified on practical and theoretical grounds. From a practical point of view, the union did not object to the term "promotional opportunity." From a theoretical perspective, in a collective bargaining environment, pay increases are tied primarily to longevity and continuance of employment. Merit is not involved in this process. On the other hand, promotional opportunities are merit based, and promotions lead to greater rewards in terms of increased pay and prestige. Thus employee perceptions of promotion opportunities addresses the issue of rewards.

Two surveys were administered, one to non-management employees and the other to administrative employees. Appendix A contains copies of the cover letter and survey sent to non-management employees, while Appendix B contains copies of the cover letter and survey sent to the administrators. The two surveys have identical questions to measure the elements of participation and organizational commitment (Sections A through E) as well as demographic information. The administrator survey has additional

sections designed to measure the number of involvement practices the organization currently employs. Only administrators were asked these questions. The reason for doing this is that any involvement practice employed by an organization would most likely be initiated by management and they would be the best ones to query regarding the use of such programs. Thus it is assumed that administrators would be the group most knowledgeable about involvement practices at their institution.

The surveys were pre-tested on a convenience sample of ten University D employees in the Spring of 2001. The sample consisted of three faculty members, four unionized staff members, two managers, and one unionized administrator. They were asked to comment on the length of the survey, how long it took them to complete it, the clarity of instructions and to provide any comments they had on improving it. The group reported that the instructions were clear and other than pointing out a few minor misspellings and some minor formatting comments, they had no suggestions for improvements. They reported that the time to take the survey ranged from 20 to 30 minutes.

Operationalization of Organizational Effectiveness

Measures of organizational effectiveness were provided by the Agency, which requires all universities to collect data and report on 24 performance indicators. In 1998, the Agency adopted the use of performance indicators in conjunction with an agency-wide change initiative to improve the management of the universities. There was a two-fold purpose in taking this stance; one is to provide points of comparison between Agency universities and between other universities in the U.S., and the second is to develop a sophisticated system of metrics that will facilitate the assessment of the

Agency's overall quality, efficiency, and effectiveness. (Agency 1998b)[1]. Table 3.2

contains the name of each individual performance indicator.

Table 3. 2 – University Performance Indicators

1. Scholastic Assessment Test Scores
2. Transfer Student Ratio
3. Second Year Persistence of Degree Seeking Baccalaureate Students Who Begin in Fall (% of Students Returning for Second Year)
4. Four Year Overall Retention Rate (% of Students Graduated after 4 years)
5. Six Year Overall Graduation Rate
6. Employment Rate of Graduates
7. Instructional Costs/Student Credit Hours Produced (Undergrad)
8. Instructional Costs/Student Credit Hours Produced (Grad)
9. Estimated Student Costs (Resident, On-Campus, Undergrad)
10. Expenditure/Student Ratio
11. Maintenance/Replacement Ratio
12. Maintenance/Budget Ratio
13. Fundraising/Student Ratio
14. Endowment/Student Ratio
15. Budgetary Flexibility
16. Financial Operating Ratio (Net Increase or Decrease)
17. Minority Enrollment
18. Female Enrollment
19. Six-year Minority Graduation Rate
20. Six-year Minority Graduation Rate
21. Ratio of Minority Faculty to All Faculty
22. Ratio of Female Faculty to All Faculty
23. Ratio of Minority Non-faculty Employees to All Non-faculty Employees
24. Ratio of Female Non-faculty Employees to All Non-faculty Employees

A simple inverse ranking score of effectiveness is constructed by determining

each university's relative ranking on each of the 24 indicators. For example, if one of the

four universities in the study ranked first of the four on an indicator, their score would be

4 and it would be considered most effective. Conversely, if a university ranked fourth of

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[1] The actual name of the Agency is not used in order for it to remain anonymous.

four on an indicator, its score would be one and would be considered least effective. Since this is a cross sectional research design, which is essentially a snapshot at a particular point in time, only the most recently available year's data are utilized. The most recent data available at the time of the study was for the period of July 1, 2000 through June 30, 2001.

In July 2000, the Agency's governing Board approved the use of a special Performance Results Funding allocation to reward the universities for producing positive results on a targeted set of indicators. This additional budgetary resource is based on performance in relation to Agency averages and individual university improvement on selected indicators. These indicators are grouped into three broad categories; Student Advancement Indicators, Financial Indicators, and Diversity Indicators. The individual performance indicators that are included in each of these categories are shown below in Table 3.3.

Table 3. 3 – Agency Reward Funded Performance Indicators

Student Advancement	Financial Indicators	Diversity Indicators
1.Transfer Student Ratio	1.Undergraduate Instructional Costs per Credit Hour	1. Underrepresented Groups Enrollment
2. Second Year Persistence Rate	2. Graduate Instructional Costs per Credit Hour	2. Underrepresented Groups 6 Year Graduation Rate
3. Six Year Graduation Rate	3. Fundraising/Student Ratio	3. Underrepresented Groups Faculty
4. Employment Rate of Graduates	4. Budgetary Flexibility	4. Female Faculty

A simple additive index based on inverse rankings is used to measure overall effectiveness for each group of reward funded performance indicators. A university's relative ranking on each of the performance indicators within a group is added to provide a composite score. For example, if the Student Advancement Indicators of a university

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were ranked number 1 in the State System on all four measures, they receive 4 points for each first place and their total score would be 16. If they ranked last on all performance indicators, they receive 1 point for each last place and their total score would be 4. Thus a university with a higher average score would be considered to be more effective than a university with a lower score. Again, data for the year July 1, 2000 to June 30, 2001 are used.

Determination of Sample Size

Calculating the proper sample size for this design was a challenging issue. Though it would theoretically be desirable to either survey the entire population or to construct a detailed, stratified sample of each grouping at each of the Agency's universities, these courses of action were not economically feasible due to monetary constraints and time limitations. Hence, a simplified, random sampling procedure is used. Again, four similarly sized universities, in terms of number of employees and students, were used as the target population. The financial resources available for this project accommodated a sampling strategy involving four universities. Table 3.4 details the calculation of the minimum sample size.

As stated earlier, there are three analytical groupings of employees, faculty, support staff, and administrators (consisting of unionized administrators and non-unionized managers.) Four universities are used in the study. In constructing a table, the first step is to multiply the number of groupings (3) by the number of universities (4), which results in 12 cells in the 3 X 4 table. A target of a minimum of 30 cases for each cell was established. A sample size consisting of a minimum of 30 cases is widely

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accepted in the field of statistics. The reason for this wide acceptance of 30 cases is that

this sample size is felt to be sufficient to stabilize variance in sample data. (Meier and

Brudney 1993, p. 151) Thus 12 cells with 30 minimum cases in each would render a

sample size of 90 at each university, for a total of 360 observations.

Table 3. 4 – Minimum Sample Size

A. Calculation of Minimum Sample Size

Number of Groupings	Number of Units	Minimum Cases Per Cell (3 * 4)	Minimum Sample Size (30/cell)	Size
3	12	30	360	

B. Distribution of Sample Size by University and Employee Groupings

University	Faculty & Coaches	Unionized Staff	Administrators	Totals
1	30	30	30	90
2	30	30	30	90
3	30	30	30	90
4	30	30	30	90
Totals	120	120	120	360

The technique of over sampling was used to reduce data collection time and more

quickly obtain the minimum number of cases. Mail surveys are often found to have poor

response rates (O'Sullivan and Rassel, pp. 174-176), thus it would be unrealistic to

expect 360 responses to be received from an initial distribution of 360 surveys.

Assuming a response rate of 20%, for every 90 surveys sent to each employee group at

each university, it would be expected that 18 surveys would be returned. In order to

increase the chances of receiving 30 responses in each category, the sample size was

increased to 1,800 (3 employee groupings * 4 universities * 150 surveys). From the sampling frame, 150 names were randomly selected for each grouping at each of the four universities. Thus 450 individuals (3 groupings * 150 surveys each) were selected at each university. These individuals were sent a survey instrument. Again assuming a 20% response rate, for every 150 surveys sent to each employee grouping, it was expected that 30 would be returned (150 surveys * 20%.)

When the sampling frame was identified and random selections were made, the actual sample size turned out to be 1,699. This was a result of the administrator group being smaller in size than the Faculty and Support Staff groups and in all but one case, numbered less than 150. Thus all of the administrators were given a survey, while only 150 in each of the other groups were randomly given surveys. Table 3.5 presents the breakdown of the actual sample by university and analytical grouping.

Table 3. 5 – Actual Sample Size by Analytical Grouping

	University A	University B	University C	University D	**TOTAL**
Faculty	150	150	150	150	**600**
Support Staff	150	150	150	150	**600**
Administrators	117	112	159	111	**499**
TOTALS	**417**	**412**	**459**	**411**	**1,699**

Sampling Frame

The sampling frame used to draw random selections came from the Agency's payroll records. Payroll is processed centrally for all universities under the Agency's

jurisdiction by a central payroll office. Their records contain the names and bargaining

unit of all employees. The Central Payroll Office was contacted and asked to provide a

list of all employees of the Agency. The Payroll Office indicated that a file was

constructed using all non-student employees as of September 4th 2002. The file was then

sorted by campus code, each of which corresponds to a university. The universities not

participating in the project were deleted from the file. The remaining universities (A, B,

C, and D) were placed in their own file.   These four university files were then sorted by

bargaining unit code to construct the three analytical groupings of faculty, support staff,

and administrators. These sorted lists then served as the sampling frame from which

random selections for each employee group at each university were drawn.

Procedures for Random Selection of Cases

The sampling frame can be viewed as several lists of population units. These

units are comprised of the three employee groups at each of the four universities. The

research design calls for drawing random samples from each of these 12 groupings.

Since drawing random selections for so many groupings would be quite tedious, it was

decided that systematic sampling with a random start could be employed to draw the

survey recipients and would provide sufficient results.

In constructing a systematic sample with a random start, the number of units in

the sampling frame is divided by the desired sample size, producing the skip interval.   A

random starting point on the list is selected and then choices are made from the list based

on the skip interval. (O'Sullivan and Rassel 1989, pp. 112-113) Table 3.6 below details

the calculation of the skip interval for each employee grouping and the random starting

point used to start the selection process.

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The Desired Sample Size column of Table 3.6 represents the sample size as determined earlier in this chapter. It is the sample size, assuming a 20% response rate, that was expected to produce at least 30 responses in each grouping.

It must be noted that a different strategy was employed for the administrator grouping. These groupings at each university, with the exception of University C, were smaller than the desired sample size of 150. Thus a decision was made to send a survey to all members in these groupings with the expectation that at least 30 from each university would be returned.

Table 3. 6 – Calculation of Skip Interval for Systematic Sampling

University	Faculty Population	Desired Sample Size	Skip Interval	Random Start Number
University A	310	150	2	140
University B	273	150	2	240
University C	353	150	2	149
University D	314	150	2	293
Faculty subtotal	1,250	600		

University	Support Staff Population	Desired Sample Size	Skip Interval	Random Start Number
University A	281	150	2	250
University B	260	150	2	164
University C	400	150	3	230
University D	321	150	2	311
Staff subtotal	1,262	600		

University	Administrator Population	Desired Sample Size	Skip Interval	Random Start Number
University A	117	117	N/A – Survey entire population	
University B	112	112	N/A – Survey entire population	
University C	159	159	N/A – Survey entire population	
University D	111	111	N/A – Survey entire population	
Staff subtotal	499	499		

GRAND TOTALS	3,011	1,699

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The use of systematic samples implies that certain assumptions must be made

regarding the underlying sampling frame. (O'Sullivan and Rassel 1989, p. 113)   The

sampling frame must be free of periodicity, which results when there is any cycle or

pattern in the sampling frame that would bias the selection of cases. Evidence has shown

that problems of periodicity are rare, and systematic selections made from lists that are

arranged in alphabetical order are usually considered to be random enough to be treated

as a simple random sample. (O'Sullivan and Rassel 1989, p. 113)

Research Process

The preceding section described how employee groups were formed, the

operationalization of variables, how sample size was calculated, the identification of the

sampling frame, and how random selections were made. This section describes the data

collection process.   First the survey delivery method is discussed, followed by a section

describing the actions taken to improve response rates. The third and fourth sections

cover data recording and data collection procedures respectively. The final section

addresses the internal consistency of the survey questions.

Survey Distribution Plan

After receiving approval to conduct research involving human subjects from the

Pennsylvania State University Office for Regulatory Compliance (ORC), the survey

questionnaires were distributed during the first half of October 2002 through each

university's campus mail system.   A copy of the campus telephone directory was

obtained in order to match a campus address to a randomly selected employee's name.
After securing approval to proceed from ORC, the Agency, the university presidents and
the various unions, each university's Mail Room Supervisor was contacted to request
their assistance in distributing the surveys to the randomly selected employees at their
university. A box containing the survey instruments was shipped to each university's
Mail Room for distribution via campus mail. This method of delivery saved on postage
costs and was chosen due to monetary constraints on this project. An envelope with each
employee's name was in the box. The envelope was addressed to the employee on plain
stationary and contained:

1. a cover letter
2. an informed consent form
3. the survey instrument and instructions
4. a pre-addressed, postage-paid envelope to be used to return the survey to the researcher
5. a postage paid postcard with the researcher's name and address printed on one side, along with a unique employee identifying code

The cover letter identified the researcher and the purpose of the survey. It also
contained assurances that confidentiality will be maintained, and the request to complete
the survey and mail it and the post card back within one week. Appendix A contains
copies of the cover letter sent to faculty and support staff, while Appendix B contains
copies of the cover letter sent to administrators.

A separate form was provided to comply with Pennsylvania State University
human subjects research policy and provide the necessary data for informed consent.
Since it is impossible to match a survey response to its author, a signed consent form did
not need to be returned. Appendices A and B provide copies of the informed consent
templates that were sent with the surveys.

In order to monitor response rates while protecting the respondent's identity, the postcard referred to above was included. The respondent was requested to mail the survey and at the same time to mail the postcard separately. This allowed the researcher to follow up with non-respondents and to protect the identity of people who provided a response. The postcard method insured that there will be no way for anyone to be able to match up a completed survey to an individual, yet still permit a tracking of response rates. The unique code on the postcard corresponds to the number assigned to each randomly selected employee and added an additional measure of privacy.

In accordance with the sampling plan above, 30 responses were needed for each of the three groupings at each of the four universities. A week after the surveys were distributed, a reminder post card was sent to each survey recipient. If the initial deadline for survey responses did not produce 30 responses per grouping, another round of survey distributions was planned. The number of surveys to be sent to each university in the second round depended on the number of responses received in the initial round. A list for each school, by each employee grouping, was maintained in order to track the number of responses received. This information was recorded from the demographic information on each survey. Figure 3.2 graphically depicts the entire survey distribution plan.

As stated above, the technique of oversampling was employed to produce a sample size that anticipated a lower response rate. This tactic was successful, and enough responses were received from the initial round of survey distributions that no additional distributions were required. Referring back to Figure 3.2, it was not necessary to go beyond Step 2.

Figure 3. 2 – Survey Distribution Schedule

Step 1		Step 2		Step 3		Step 4		Step 5
October 11, 2002		October 18, 2002		November 1, 2002		November 15, 2002		November 29, 2002
Distribute Initial Round of Surveys	→	Send Reminder Postcard	→	Distribute Second Round of Surveys for Groups with Less Then 30 Responses	→	Continue Tracking Responses Received	→	End Data Collection
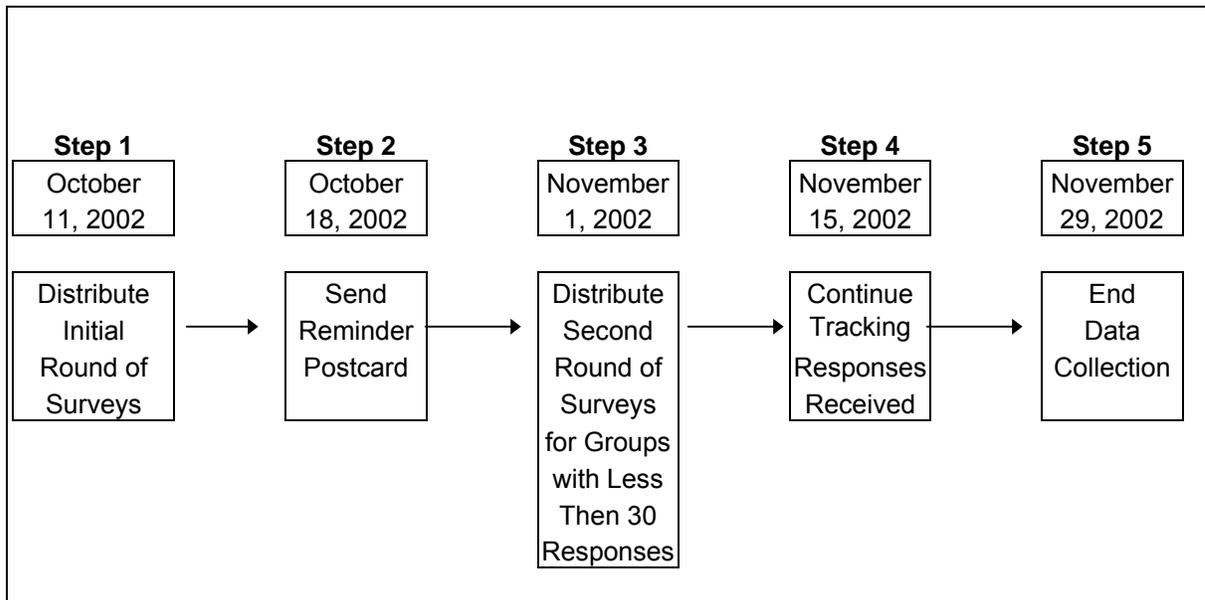
Actions to Improve Response Rates

In order to encourage survey recipients to return a survey, several actions were taken. First, support for the project was built at the Agency and university levels by offering to give a formal report and presentation on the findings. Agency leaders and university presidents were given the opportunity to review all materials sent to employees. Second, state level union officials were contacted to provide them with an opportunity to review the survey instruments and have their questions answered. Union leadership was assured that the only intention of this research project was for dissertation purposes. The union officials were asked to relay their support for the project by providing a written statement for inclusion with the survey materials sent to their members. All union leaders granted this request. The Agency had indicated that union approval was necessary for the project to proceed. Third, each university's mailroom supervisor was personally contacted to ask them for their assistance in distributing

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surveys and to stress the importance of their role in completing the project. A small cash honorarium was also given to them. Fourth, each survey recipient and any interested union member or Agency manager was offered the opportunity to read the results of the survey. This was accomplished by providing the respondent with a web address that will contain a PDF file of the dissertation when completed.

Data Recording Procedures

During the time frame of mid October to early December 2002, a total of 738 usable surveys were returned through the United States Postal System. As each survey was received, it was assigned a case identifying number and its responses were entered into an SPSS® data file. In the SPSS® file, a variable was set up for each question on the survey. The variable contained values that correspond to the scales used on each survey question. Each response to a survey question was recorded in the data file. Each survey was considered to be a case. For quality control and accuracy purposes, randomly selected cases were spot checked to ensure that there were no incorrect recordings. No discrepancies were noted during this procedure, which was performed 50 times.

In addition, 632 response cards were also received during the same time frame. The response cards were sent with the surveys and included a code that corresponded to the name of the person who received it. When the response cards were returned, the code was used to update the sample file and track non-respondents. Every analytical group at each university was well represented in the study, with over 40 responses in each employee category.

Response rates were also recorded via the use of specialized font styles on the survey instruments. By looking at the page numbering convention of each survey instrument returned, the respondent could be classified by analytical grouping and by university. For example if a survey contained "***page 5***," this indicated that the survey was originally sent to a University D Administrator. If a survey contained "page 5," this indicated that the survey was sent to University A staff member. A "*pg. 5*" on the survey indicated that the survey was sent to a University C faculty member.   This was done to insure that each case could be classified into one of the analytical groupings, which is a key element of this study.   With the use of this coding system, cases without responses to the questions on bargaining unit and university could still be classified into an analytical group.

Data Aggregation

In order to perform some of the statistical procedures, the raw survey data had to be aggregated into summary variables. As described earlier, the questions regarding involvement perceptions in survey sections A – E were administered to all three analytical groupings (faculty, staff, and administrators) while the questions regarding involvement practices in survey sections F – I were asked of administrators only. Figure 3.3 illustrates the data aggregation process for the perceptual questions asked of all respondents.

Each section of the survey was designed to measure a particular variable as a scale through the use of several questions. Each question carried equal weight. The responses to these questions were then summarized into an average score. This average score was calculated at a variety of points including the overall sample level, the

university level, and the analytical group level. The aggregation level was dependent

upon which variables were needed to test each hypothesis.   In order to make

comparisons among survey sections using different scales, all scores were also converted

to standard Z scores.   A composite Z score was then constructed to represent an overall

score for power, rewards, information, and knowledge.

Figure 3. 3 – Data Aggregation Process for Perceptual Measures
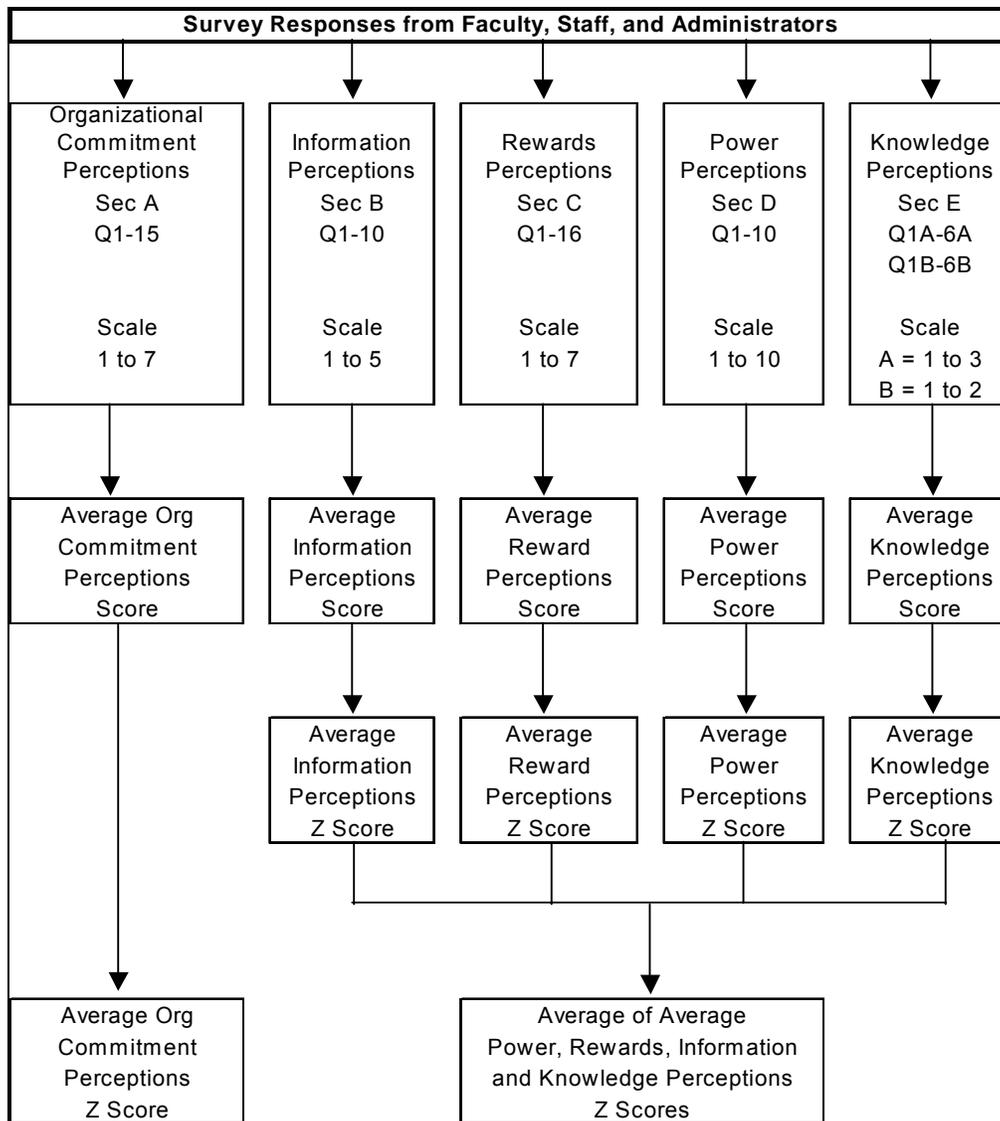
The aggregation process for the perceptual data collected by survey sections A-D was relatively straightforward since simple Likert-like scales were used. Aggregation was accomplished through the use of simple arithmetic averages. Section E, which measured knowledge, departed from this model and employed a two-part response for each question. Each respondent was asked a series of questions asking if they received a certain type of training (1=Yes, 2=No, 3= Don't Know) and whether or not it was adequate (1= Yes, 2=No.) A strategy was developed to combine the two responses for each question into a single score. First, the two responses were re-coded so that Don't Know =0, 1=No, and 2=Yes. This was done so the scale was now going in the same direction as the scales used in the other questions. (i.e. a high response on a question in another section, indicated a higher measure of the variable.) After the re-coding process, the two responses for each question were combined into one score. Then combined score values were assigned to each question based on the following combinations in Table 3.7 below.

Table 3. 7 – Survey Section D (Knowledge) Re-coded Responses

Response to Question A Received Training?	Response to Question B Was training adequate?	Points Assigned
0 (Don't Know)	2 (Yes)	-1
0 (Don't Know)	1 (No)	0
1 (No)	1 (No)	1
1 (No)	2 (Yes)	Not logical
2 (Yes)	1 (No)	2
2 (Yes)	2 (Yes)	3

The data aggregation strategy for the involvement practices section of the administrator's surveys is illustrated in Figure 3.4 below. The same aggregation strategy used for the perceptual survey questions is used here. Though the four sections did not have an equal number of questions, each question carried equal weight. The same Likert-like scale was used for all four sections. Again, each section of the survey utilizes several questions to measure a particular variable. In this case, the variables measured are administrator estimates of the organization's use of a variety of involvement practices. A simple average score was computed for the responses in each section of the survey. These average scores were then converted to standard Z scores for comparative purposes.

Figure 3. 4 – Data Aggregation for Involvement Practices Measures

Survey Responses from Administrators			
Information Practices Sec F Q1-7 Scale 1 to 7	Rewards Practices Sec H Q1-7 Scale 1 to 7	Power Practices Sec I Q1-9 Scale 1 to 7	Knowledge Practices Sec G Q1-9 Scale 1 to 7
Average Information Practices Score	Average Reward Practices Score	Average Power Practices Score	Average Knowledge Practices Score
Average Information Practices Z Score	Average Reward Practices Z Score	Average Power Practices Z Score	Average Knowledge Practices Z Score

This section explained how raw survey data were condensed into standardized variables that were eventually used to test the three hypotheses. The final section continues with the theme of analyzing raw survey data and covers how reliable the survey questions were.

Internal Consistency of Survey Questions

Basically, a measure of internal consistency looks at the average correlation of the identifiable parts of the survey. Since the surveys administered in this project used Likert-like scales, Cronbach's alpha (α) provides a reasonable indicator of internal consistency. (Black 1999, pp. 278-279) Cronbach's alpha is also suitable for providing a reliability coefficient on a homogenous section of an instrument (Black 1999, p. 286), another condition met by the surveys used in this research project. The questions in each section of the survey are designed to measure a single composite variable. By calculating Cronbach's alpha for each section, a statistic is provided that measures how well the items in each section measure the variable domain. The higher the average correlation between the questions, the greater the likelihood that the questions are measuring the same variable domain. The alpha coefficients for the survey questions were calculated using SPSS® version 11.0.1 and are presented in Table 3.8 below.

In reviewing Table 3.8, it should be noted that survey sections A through E have higher N values than sections F through I. This was due to the fact that all employee groups (faculty, support staff, and administrators) were asked to respond to questions in sections A through E, while only administrators were asked the questions regarding high involvement practices in sections F through I. The standardized item alphas computed

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reveal that all survey sections, except for sections E and H, had values over .80, with 4

sections scoring over .90.   Overall, the alpha coefficients are relatively strong, except for

the moderate .65 and .69 alpha's in Sections E and H respectively. The low alpha scores

for the knowledge variable may be linked to the structure of the questions, which did not

follow a Likert-like scale. Each item in this section followed a two question "yes/no"

format. The various yes-no answers combinations were then converted into a numerical

scale. But generally, based on the alpha values calculated, the survey instrument seems

to be reliable in terms of internal consistency. Appendix D contains tables that show the

effect on a survey section's alpha coefficient if a particular question was excluded from

the calculation. There are no notable differences in alpha if particular items are omitted.

Table 3. 8 – Cronbach's Alpha by Survey Section

Survey Section: Variable	Standardized Item Alpha
A: Organizational Commitment (N = 709)	.90
B: Information Sharing (N = 711)	.90
C: Rewards (N = 695)	.95
D: Power (N = 720)	.89
E: Knowledge (N = 666)	.65
F: Information Sharing Practices (N = 225)	.91
G: Knowledge Practices (N = 223)	.86
H: Reward Practices (N = 205)	.69
I: Power Practices (N = 217)	.82

CHAPTER 4 – RESULTS

This chapter presents the results of a variety of analytical techniques applied to the data collected. The first part of the chapter focuses on describing the respondents and the data they provided. The second part discusses the statistical and non-statistical analytical techniques performed on the data. The final part contains an evaluation of this research project's three hypotheses.

General Description of Data

This section addresses questions regarding the characteristics of the data providers. Information is presented in three sections that describe who is providing the data and what the data says. In the first section, response rates are analyzed at the agency (sample), university, and employee grouping levels. In the second section, demographic information of respondents is examined. And in the last section, descriptive statistics of the data set are presented.

Survey Response Rates

Survey response rates are presented at the individual university level and at the total sample level. At each of these levels, these rates are examined across the employee

groupings of faculty, support staff, and administrators. Response rates are calculated as a percentage of the employee population total at each university and as a percentage of each university's sample population total. A summary of these calculations is presented below in Table 4.1.

Table 4. 1 – Response Rates by University

University	Total Population of Employees	Sample Total	Sample Total as Percentage of Population	Surveys Returned	Surveys Returned As Percentage of Total Population	Surveys Returned As Percentage of Sample Total
A	708	417	58.9 %	174	24.6 %	41.7 %
B	645	412	63.9 %	161	25.0 %	39.1 %
C	912	459	50.3 %	191	20.9 %	41.6 %
D	746	411	55.1 %	212	28.4 %	51.6 %
Totals	**3,011**	**1,699**	**56.4 %**	**738**	**24.5 %**	**43.4 %**

An examination of the Totals line of Table 4.1 reveals that the four university study group had a total of over 3,000 employees. Of this number, 1,699 employees were selected to receive a survey, which represents at least 50% of employees at all of the institutions.   Of the surveys sent, a total of 738 were returned, which represents 24.5% of the population total and 43.4% of the sample total. Responses rates under 50% are considered by some researchers to be "scientifically unacceptable" (Mangione 1998, pp. 404-405) or "effectively worthless." (Hakim 2000, p. 93)   Other researchers state that while response rates are paramount, another important thing is to learn as much as possible about those who did not respond to the information request. (Sapsford 1999, p. 96; Babbie 1998, pp. 261-262) Since this research design is based on the use of

employee groupings, examination of the response rates at that level may reveal if the sample is underrepresented by university and/or employee classification.

Table 4.2 presents an expanded view of response rates at each university by the faculty, staff and administrator analytical groupings. As in Table 4.1, the columns contain response rate information expressed as percentages of the population totals and sample totals.

The faculty sample response rates are consistently the lowest among all groupings, ranging from 32.7% at University B to 42.0% at University D. The sample response rate for the Staff grouping ranges from 40.7% at University B to 54.7% at University D. Administrators grouping sample response rates range from 42.8% at University C to 60.4% at University D.

Overall, the sampling techniques employed produced more than the sought-after target of 30 responses in each of the employee groups at each university. Sample responses rates range from a low of 32.7% for the Faculty at University B to a high of 60.4% for the managers at University D. Faculty sample response rates were all under 42% at all institutions. Staff and administrator sample response rates were all over 41% at each university, reaching as high as 60% at University D. The rates of some groups, especially the Faculty group, appear low percentage-wise, despite of the previously mentioned efforts to increase response rates. But given the resource limitation of this project, the response rates were better than expected and enough cases were obtained to assume that variance in the sample is stabilized.

Table 4. 2 – Response Rates by Employee Groups

Analytical Grouping	Total Population of Employees	Sample Total	Sample as Percentage of Population	Surveys Returned	Surveys Returned As Percentage of Total Population	Surveys Returned As Percentage of Sample Total
University A						
Faculty	310	150	48.4 %	56	18.1 %	37.3 %
Staff	281	150	53.4 %	67	23.8 %	44.7 %
Admin	117	117	100.0 %	51	43.6 %	43.6 %
Total	*708*	*417*	*58.9 %*	*174*	*24.6 %*	*41.7 %*
University B						
Faculty	273	150	55.0 %	49	18.0 %	32.7 %
Staff	260	150	57.7 %	61	23.5 %	40.7 %
Admin	112	112	100.0 %	51	45.5 %	45.5 %
Total	*645*	*412*	*63.9 %*	*161*	*25.0 %*	*39.1 %*
University C						
Faculty	353	150	42.5 %	56	15.9 %	37.3 %
Staff	400	150	37.5 %	67	16.8 %	44.7 %
Admin	159	159	100.0 %	68	42.8 %	42.8 %
Total	*912*	*459*	*50.3 %*	*191*	*20.9 %*	*41.6 %*
University D						
Faculty	314	150	47.8 %	63	20.1 %	42.0 %
Staff	321	150	46.7 %	82	25.6 %	54.7 %
Admin	111	111	100.0 %	67	60.4 %	60.4 %
Total	*746*	*411*	*55.1 %*	*212*	*28.4 %*	*51.6 %*
Agency Totals	**3,011**	**1,699**	**56.4 %**	**738**	**24.5 %**	**43.4 %**

Demographic Information

The survey instruments used in this project asked for demographic data such as; age, sex, race, education level, and total number of years employed. Table 4.3 below contains a demographic breakdown of the sample data by employee grouping.

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Table 4. 3 - Demographic Information by Sampled Employee Group

	Support Staff		Faculty		Administrators		TOTALS	
	Sample Level							
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Sex:								
Male	88	32%	121	55%	127	54%	336	46%
Female	188	68%	99	45%	108	46%	395	54%
Total	**276**	**100%**	**220**	**100%**	**235**	**100%**	**731**	**100%**
Age:								
Under 40	38	14%	39	18%	60	26%	137	19%
40 to 49	109	40%	63	29%	78	33%	250	35%
50 to 59	114	41%	93	43%	85	37%	292	40%
Over 60	14	5%	22	10%	10	4%	46	6%
Total	**275**	**100%**	**217**	**100%**	**233**	**100%**	**725**	**100%**
Race:								
AfrAmer	8	3%	9	4%	8	3%	25	4%
Asian	-	-	8	4%	2	1%	10	1%
Caucasian	258	94%	193	87%	220	94%	671	92%
Hispanic	5	2%	2	1%	2	1%	9	1%
Other	4	1%	8	4%	3	1%	15	2%
Total	**275**	**100%**	**220**	**100%**	**235**	**100%**	**730**	**100%**
Education:								
HS Grad	86	31%	-	-	-	-	86	12%
Some College	139	50%	-	-	16	7%	155	21%
College Grad	32	12%	2	1%	60	26%	94	13%
Some Grad School	10	4%	3	1%	21	9%	34	5%
Grad Degree	9	3%	215	98%	134	58%	358	49%
Total	**276**	**100%**	**220**	**100%**	**231**	**100%**	**727**	**100%**
Avg. No. of Years on Job:	15	N/A	13	N/A	12	N/A	13	N/A

In terms of the sex demographic, most of the respondents (roughly 68%) in the staff grouping were female. Respondents in the faculty and administrator groupings were nearly equal, with males respondents having slight majority (55% and 54% respectively).

Age-wise, 75% of the respondents were in their 40s and 50s. Racially, Caucasians made up the vast majority of the respondents (92%), though there was representation in all racial groupings.

In terms of education, the faculty grouping had the highest level with over 98% possessing graduate degrees. The manager employee grouping also had a high level of education, with 58% possessing a graduate degree and roughly 93% possessing at least a college degree. The staff group generally possessed a lower level of education, with over 80% reporting a high school degree or taking some college classes. In looking at the number of years on the job, all groups had at least an average of 12-15 years of employment. Staff had the greatest amount of time on the job, followed by faculty and then administrators. Appendix C, tables 1 through 4 contains a breakdown of the demographic data by university and by employee group. A review of these tables reveal that each university is roughly similar in terms of demographics, with most of the patterns above repeated at the university level.

This section focused on describing some demographic characteristics of the survey respondents, including attributes such as sex, age, race, education, and average tenure of employment. The next section will examine the data provided by these respondents by reviewing the basic statistics of means and standard deviations.

Descriptive Statistics

Appendix C, Tables 5-9 contain the means and standard deviations for each survey section. Each table also includes the number of responses, and the range of the response scale used for each section. Two categories of variables are represented by

tables 5a through 9a. The first category, in the columns labeled "Perceptions," contains

statistics for the variables representing employee perceptions of power, rewards,

information, knowledge and organizational commitment. This information was derived

from the survey questions asked of all employees. The second variable category, in the

columns labeled "Practices," contains statistics regarding involvement practices. This

information was derived from the administrator surveys only. These surveys had an extra

section where administrators were asked to provide an estimate on the percentage of

various types of involvement management techniques used by the organization. Table 5a

presents statistics for the two variable categories for the entire sample, while Tables 6a-9a

presents statistics for Universities A through D respectively. Tables 5b through 9b

provide a breakdown of descriptive statistics for the perceptual variables by employee

group at the sample and individual university levels.

Table 4. 4 – Sample Level Variable Descriptive Statistics

	Agency Perceptions				Agency Practices			
Variable	Scale	N	Mean	Std Dev	Scale	N	Mean	Std Dev
Power	1-5	720	3.37	.76	1-7	217	2.08	1.05
Rewards	1-7	695	3.39	1.42	1-7	205	2.25	.96
Information	1-5	711	3.15	.80	1-7	225	3.60	1.37
Knowledge	-1to3	738	1.38	.48	1-7	223	2.57	1.12
Organizational Commitment	1-7	709	5.05	1.00	N/A	N/A	N/A	N/A

Table 4.4 contains the descriptive statistics for the perceptual and practice

variables at the sample level. For the power and information perceptual variables, the

average respondent felt they had some amount of power (3.37) and information (3.15)

based on the five category scale. The dispersion was fairly tight around the means, with

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standard deviations of less than one point (.76 and .80.) The mean for the reward

perceptions was 3.39 on a seven category scale, which indicates that most respondents

slightly disagreed with the notion of promotional opportunities being tied to individual

and/or organizational performance. This variable was more widely dispersed than the

other variables with a standard deviation of 1.42 points. The knowledge perceptual

variable, which had to be re-coded due to the unique response categories on the survey

instrument (explained in the section on Data Aggregation on page 159), has a mean of

1.38. This indicates that most respondents felt they did not receive enough training on

their position, and with a standard deviation of .48, the dispersion pattern is quite tight. In

looking at organizational commitment, most respondents slightly agree that they are

committed to the organization, but with a standard deviation of one point, the data are

relatively dispersed over the "neither" category to the "agree" category.

In looking at the practices variables in Table 4.4, the first thing to note is that the

same scale was used in all survey sections. The variables power, rewards, and

knowledge had means of 2.08, 2.25, and 2.57 respectively. Most of the responses were

dispersed over categories one and three, as indicated by standard deviations of 1.05, .96,

and 1.12. This means that for practices relating to power, rewards and knowledge, most

administrators indicated that their organizations offered "none" (0%) to "some" (21-

40%), with most falling in the "almost none" category (1-20%). Information sharing

practices were more prevalent, with a mean of 3.60 and a standard deviation of 1.37,

most responses were dispersed over the "some" category (1-20%) to the "about half"

category (41-60%.)

Table 4. 5 - Sample Level Descriptive Statistics by Employee Group

Perceptual Variable	Scale	Sample Level - Support Staff			Sample Level - Faculty			Sample Level - Administrators		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	269	3.11	.79	216	3.34	.64	235	3.69	.70
Rewards	1-7	267	2.75	1.24	200	3.88	1.36	228	3.69	1.41
Information	1-5	267	2.80	.80	213	3.36	.64	231	3.37	.80
Knowledge	-1to3	277	1.28	.45	223	1.31	.49	238	1.56	.47
Organizational Commitment	1-7	269	4.82	.95	211	5.09	1.04	229	5.27	.95

In examining the perceptual data by analytical grouping at the sample level, there are clear similarities between the faculty group and the administrator group. Table 4.5 shows a clear distinction between the means for support staff and the other two employee groupings. The support staff's means for each variable are consistently lower than the other two groupings. Rewards and information are the two categories with the greatest difference. The data indicate that most support staff felt under-informed and disagreed with the notion that their promotional opportunities are linked to any type of performance measures. The differences in means between the support staff and the other two groups are much less pronounced for the power and organizational commitment variables. The means for the power variable indicate that each group felt they have some influence, with administrators having the most (3.69) and support staff the least (3.11). This rank order of means is repeated for the commitment variable as well, indicating that all employee groups are slightly committed to the organization. The mean of the knowledge variable for staff and faculty is almost the same, while the administrator's mean is slightly higher. It is interesting to note that the standard deviations for each variable are fairly consistent across all groupings, which indicates that the dispersion of data around the means is roughly similar.

Tables 6a through 9a in Appendix C contain the means and standard deviations of the perceptual and practice variables broken down by university. A review of the statistics for each university in Tables 6a, 7a, 8a, and 9a reveals a similar pattern among institutions. The means of the power and rewards variables were contained in the range 3.27 to 3.52. Information's mean ranged from 3.11 to 3.19, while knowledge ranged from 1.32 to 1.44. Organizational commitment ranged from 4.92 to 5.20. The standard deviation for these variables across the universities also follow a similar pattern. This seems to suggest that respondents at different universities have similar perceptions of involvement management. Most respondents at the universities felt some level of power, felt they had some level of information and rewards, felt they could use more training, and had a slight level of commitment to the organization.

The means and standard deviations, by university, for the practices variables are also presented in Tables 6a to 9a in Appendix C. In all cases, the administrators reported that information sharing practices are most common, with means ranging from 3.48 at University C to 3.71 at University D and standard deviations of well over 1. This indicates that most of the responses are dispersed among survey categories 2 (Almost none 1-20%) to 4 (About half 41-60%). Knowledge has the second highest mean among all the practices variables at each universities. The means range from a low of 2.48 at University C to a high of 2.68 at University A. With a standard deviation ranging from .94 to 1.21, most of the knowledge responses fall in categories 1 (None 0%) to 3 (Some 21-40%). There was no consistent rank order of the power and rewards variables among the universities. The mean for reward practices ranged from 2.10 to 2.51 with standard deviations ranging from .83 to 1.16. The means for power practices ranged from 1.86 to

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2.37 with standard deviations ranging from .89 to 1.27. These statistics indicate that a majority of the responses are grouped in the first three survey categories which covers "None" (0%) to "Some" (21-40%.) The means and standard deviations indicate that the universities as a whole do not offer a great number of involvement management techniques related to power, rewards, and knowledge but they do a better job sharing information.

Tables 6b to 9b display the means and standard deviations of the perceptual variables for each university by analytical grouping. Again there is a sharp distinction between the means for support staff and the means of the other two groups. On the power, rewards, and information variables, staff means generally lag behind the means for administrators and faculty. Faculty and administrators also seem to have higher means on the organizational commitment variables. Thus it seems that members of a particular analytical grouping are more like their counterparts at other universities as opposed to their co-workers at their own university.

The previous section provided some demographic information on the respondents to get a sense of who is supplying the data. This section provided some basic descriptive statistics for the data at a variety of analytical levels and gauged what the respondents are saying. The next section will involve the discussion of the statistical procedures performed to validate the survey instrument and the analytical techniques used to evaluate the research hypotheses.

Data Analysis

This section will describe the statistical and non-statistical analyses performed on the collected data. The first procedure, factor analysis, examined all survey questions to uncover any underlying association between the different survey sections. The second statistical procedure was regression, which was performed in order to evaluate the relationship outlined in hypothesis two. And finally, graphical analysis will be employed to examine the relationships outlined in hypothesis one and three.

Testing the Instrument Structure

The first statistical procedure applied to the survey data was factor analysis. Generally, factor analysis is used to "uncover the latent structure (dimensions) of a set of variables." (Garson n.d., Overview) In other words, the researcher may have a theory in mind and wishes to verify that his or her groupings of variables are loading on the same factor. (Garson n.d., Overview; StatSoft 2003, General Purpose; Thapalia n.d., Definition; O'Sullivan and Rassel 1989, pp. 262-262) This use of factor analysis is germane to this project, namely to test the structure of the survey instrument.

The survey instruments used in this research project were designed in sections, with each section measuring a particular variable. All analytical groups answered questions pertaining to their perceptions of organizational commitment (section A), power (Section D), rewards (Section C), information (Section B), and knowledge (Section E). Only administrators answered questions (Sections F – I) regarding the number of involvement practices. A factor analysis was performed on the questions in Sections A – E because there is an underlying theoretical basis to these questions. The questions answered by the administrators in Sections F – I are designed to gauge how

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many specific practices are employed by each university and were not included in the factor analysis.

The factor analysis utilized the principal components method and varimax rotation.   Since there are five perceptual variables being measured by the survey instrument, five factors were selected for extraction.   In a factor analysis, eigenvalues measure the amount of variation in the total sample accounted for by each factor. The eigenvalues produced by the factor analysis are presented below in Table 4.6. A review of the table shows that five extracted factors account for over 52% of variance in the variables.

Table 4. 6 – Eigenvalues Produced in the Factor Analysis

	Initial Eigenvalues		
		% of	Cumulative
Component	Total	Variance	%
1	17.060	29.9	29.9
2	4.911	8.6	38.5
3	3.167	5.6	44.1
4	2.567	4.5	48.6
5	2.248	3.9	52.5

As stated above, factor analysis can be used to verify the underlying conceptual structure of a set of variables. Since the questions in the survey were designed to measure particular variables, it would be expected that the questions in each section would load on the same factors. Appendix E presents the rotated factor loadings for the survey questions asked of all analytical groups. The table in Appendix E shows that, with a few exceptions, the survey questions for a particular section load on the same factor (correlations under .25 were suppressed to enhance the readability of the table.) Though some questions crossloaded on more than one factor, in most cases the largest

correlation score is on the appropriate factor. The crossloaded correlations were not strong enough to merit exclusion from further analysis, particularly in light of each survey section's strong reliability scores. Since each survey section loads on separate factors, this indicates that the survey sections are measuring different variables and provides reasonable assurance that there are no underlying common association between questions in different sections.

This section presented a statistical technique whose purpose was to evaluate the survey instrument itself using the data it produced. The next section will cover a statistical technique that is useful in evaluating one of the research questions. This next section discusses the model's predictive capacity through multiple regression.

Model Predictive Capacity

Research hypothesis two is framed as a predictive relationship, thus regression analysis is appropriate. (Sirkin 1999, pp. 500-504) A stepwise linear regression was performed where the dependent variable is organizational commitment and the independent variables are employee perceptions of power, rewards, information sharing, and knowledge. The independent variables were obtained from a principal components factor analysis of the survey responses to the questions on power, rewards, information, and knowledge. The dependent variables were obtained from a separate principal components factor analysis performed on just the survey responses to the questions on organizational commitment. In both cases, new variables were created based on the results of the factor analyses. This technique helps to reduce redundant information by producing a new set of uncorrelated variables based on the strongest correlations in the old data set. (Wang 2005, pp. 1-2)

The analyses focus on five elements of regression; simple correlations, multiple correlations (R), multiple correlations squared (R^2), partial betas and the partial betas' significance. The simple correlation is each individual variable's correlation with the dependent variable. R, which is sometimes referred to as the coefficient of correlation, measures the correlation of each variable controlling for all the other variables already included in the equation from previous steps. R^2 is the percentage of variance in the dependent variable explained by the independent variables and is sometimes called the coefficient of determination. Partial betas are the standardized regression coefficients and indicate the relative predictive strength of each independent variable in the equation. Significance represents the probability that the partial beta coefficients are products of random chance. Significant values less than 0.05 indicate that the probability of a beta value being a product of chance is relatively small. Significance levels of 0.05 or less indicate that the null hypotheses of no predictive value can be safely rejected. In other words, a significance value of 0.05 or less indicates that the independent variable has a significant amount of explanatory capacity for the dependent variable. Table 4.7 contains the regression results at the sample level and for each employee group.

In reviewing the correlation results at the sample level, the simple correlation calculations show that the power, rewards and information variables have moderate correlations to organizational commitment. Knowledge has a very weak correlation to the dependent variable. The multiple correlations (R) for the sample level in Table 4.7 show the relationship between organizational commitment and the four variables of power, rewards, information, and knowledge. Each variable has decreasing correlation

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with organizational commitment when controlling for the other variables included in the equation before it, with rewards and power having the strongest correlations.

Table 4. 7 – Regression Results for Agency and Employee Groups
Dependent Variable = Organizational Commitment

Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Sample Level (N = 648)					
Rewards	0.43	0.43	0.19	0.44	<0.01
Power	0.40	0.60	0.36	0.42	<0.01
Information	0.34	0.69	0.47	0.35	<0.01
Knowledge	0.11	0.70	0.49	0.12	<0.01
Support Staff (N = 251)					
Information	0.39	0.39	0.15	0.46	<0.01
Rewards	0.34	0.53	0.28	0.46	<0.01
Power	0.24	0.66	0.43	0.40	<0.01
Knowledge	-0.01*	-	-	-	-
Faculty (N = 184)					
Power	0.49	0.49	0.24	0.49	<0.01
Rewards	0.48	0.64	0.41	0.50	<0.01
Information	0.18	0.71	0.51	0.36	<0.01
Knowledge	0.04	0.74	0.55	0.23	<0.01
Administrators (N = 213)					
Power	0.51	0.51	0.25	0.47	<0.01
Rewards	0.44	0.66	0.44	0.41	<0.01
Information	0.35	0.73	0.54	0.30	<0.01
Knowledge	0.22	0.74	0.56	0.14	<0.01

* - Not significant at the .05 level

The multiple R^2 shows the four variables of power, rewards, information and knowledge accounting for almost 50% of the variance in organizational commitment. The relative strength of each variable can be seen in the partial betas. Rewards and

power are the strongest predictors of organizational commitment, followed by information sharing and knowledge. All of these variables are significant at less than the .01 level.

In reviewing the data at each employee group level, it is noted that the order of correlational and predictive strength of the variables is different for each group. Table 4.7 reveals that the regression results for the faculty and administrators are very similar. Power and rewards have moderate simple correlations in these two groups and together explain 41% of the variation in organizational commitment for faculty and 44% of the variation for administrators. Power and rewards are also the two strongest, significant predictors of organizational commitment for both groups. For the faculty grouping, information sharing and knowledge are weakly correlated to organizational commitment. For administrators, the correlations for these two variables are slightly stronger, but still weak. Information and knowledge have less predictive power than power and rewards for the faculty and administrator groups but both are significant at less than the .01 level.

In reviewing the regression results for support staff, Table 4.7 reveals that information sharing, rewards, and power have moderate simple correlations with organization commitment. Knowledge has a very weak negative correlation. Together, the three variables of information, rewards, and power account for 43% of the variance in organizational commitment for staff employees. Information sharing, rewards, and power are the strongest, significant predictors of organizational commitment for the support staff group.

This section reported on the results of regressions performed at two analytical levels in support of hypothesis two. These levels include the sample level and the

employee grouping level. At the sample level, the R^2 value of 49% for rewards, power,

information, and knowledge indicates a fairly strong, positive association with

organizational commitment. The beta values indicate that all variables were significant

predictors of organizational commitment with rewards, power and information having the

strongest effects, with knowledge having very little. At each employee grouping level,

the relationships between the four independent variables and organizational commitment

are, for the most part, positively correlated to organizational commitment. The only

exception was the negative correlation between knowledge and organization commitment

at the support staff level. The results revealed that administrators and faculty tended to

have power and rewards as the strongest significant predictors of organizational

commitment, while for staff it was primarily information and rewards. The next section

will focus on utilizing graphical techniques to examine relationships between variables in

support of hypotheses one and three.

Graphical Analysis

The research design utilized in this project has depth of participants at each

institution, but there are only four institutions for comparative purposes. This limits the

number of statistical techniques that can be applied to the data in order to evaluate the

relationships between variables in different institutions. Though it is exploratory in

nature, graphical analyses can be employed to get sense of the patterns that underlie the

data. This type of analysis will be used in two instances; first, to chart the relationship

between university involvement practices and employee perceptions of involvement

practices (hypothesis one) and; second, to chart the relationship between university

rankings on performance indicators and employee perceptions of involvement and

organizational commitment (hypothesis three).

Plotting Involvement Practices versus Involvement Perceptions

In order to evaluate the first hypothesis, a chart was constructed based on

responses to survey sections regarding employee perceptions of the components of

involvement management; which are power, rewards, information and knowledge. The

responses for each section were averaged and converted to Z scores to allow for

comparisons between different scales. These Z scores were plotted by institution on two

levels. The first level contains a composite average Z score for all the components of

involvement together. The second level contains the average Z scores for each individual

component of involvement (power, rewards, information, and knowledge.)

On the charts described above, survey responses from the administrators on

practices relating to involvement management were plotted. As was stated earlier,

surveys given to administrators contained an extra section that asked them about the

various involvement practices utilized by their institution and/or department. (see

Appendix B) These survey responses were averaged for each section and then converted

to Z scores. Since only the administrators were asked questions regarding involvement

practices at the institutions, the same amounts were plotted on each employee group's

chart. In other words, the number of practices remains constant on each chart for each

analytical grouping, but the perceptions will vary relative to the practices. The point of

this type of analysis, though very rudimentary and exploratory, is to see if there are any

visual patterns in the data. This can give an indication of how involvement management

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practices affect each group's perceptions of involvement management. This is similar to asking that given the number of involvement practices at an institution, how do the perceptions of involvement vary by employee group.

Figure 4.1 plots the composite Z scores for the perceptions of involvement at each university versus the number of practices at each university.   In reviewing the chart at the extremes, the university with the highest number of involvement practices had the highest composite score of involvement perceptions and the university with the lowest number of involvement practices had the lowest composite score of involvement perceptions. In between these two extremes, this relationship was not repeated.   This type of graphical analysis can be repeated for the employee groupings of support staff, faculty, and administrators.

Figure 4. 1 – Composite Involvement Perceptions vs. Number of Involvement Practices
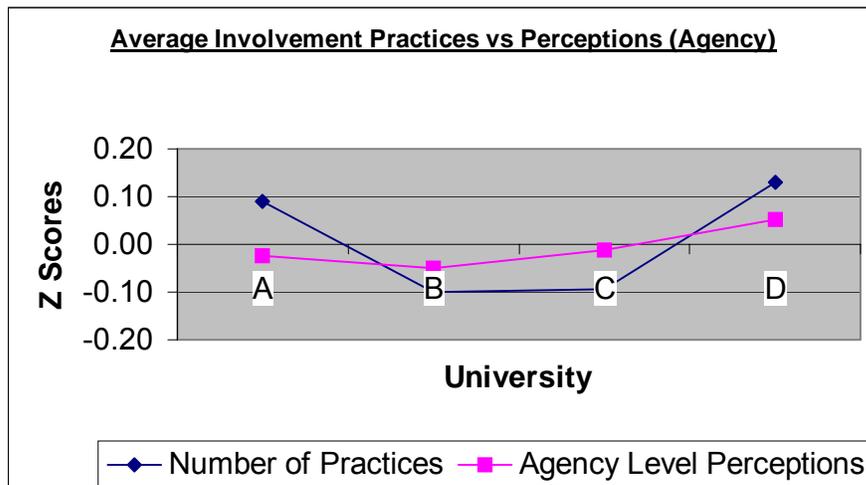
Figure 4.2 charts the composite Z scores of the number of involvement practices versus the support staff's perceptions of involvement management by institution. The

chart shows that the school with the most number of involvement practices does not have the highest perceptions of involvement nor does the school with the least amount of involvement practices have the lowest perceptions of involvement. A notable pattern is that all of the staff perceptions lie below the practices line.

Figure 4. 2 – Staff Involvement Perceptions versus Number of Involvement Practices
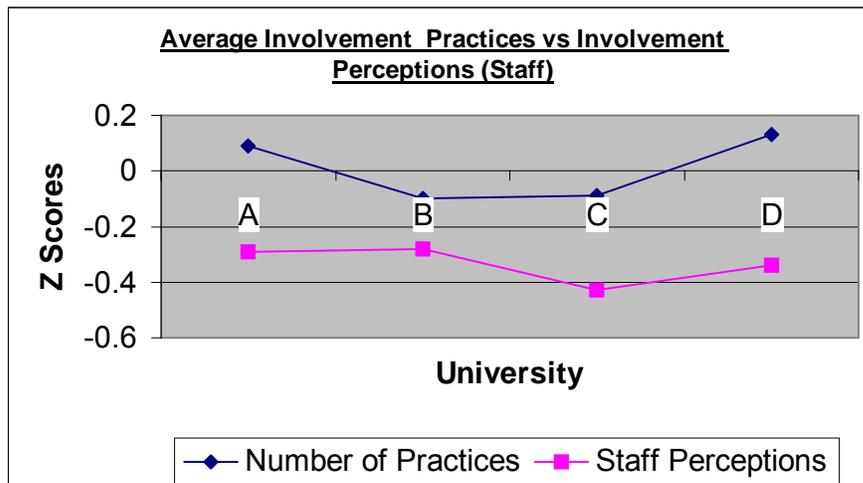
Figure 4.3 charts the composite Z scores of the number of involvement practices versus the faculty's perceptions of involvement management by institution. The plots show that in all but one case, a positive relationship exists between the number of involvement practices and faculty perceptions of involvement. A notable pattern is the position of the perceptions line relative to the practices line. Unlike the staff chart, the perceptions line generally lies above the practices line.

Figure 4. 3 – Faculty Involvement Perceptions versus Number of Involvement Practices
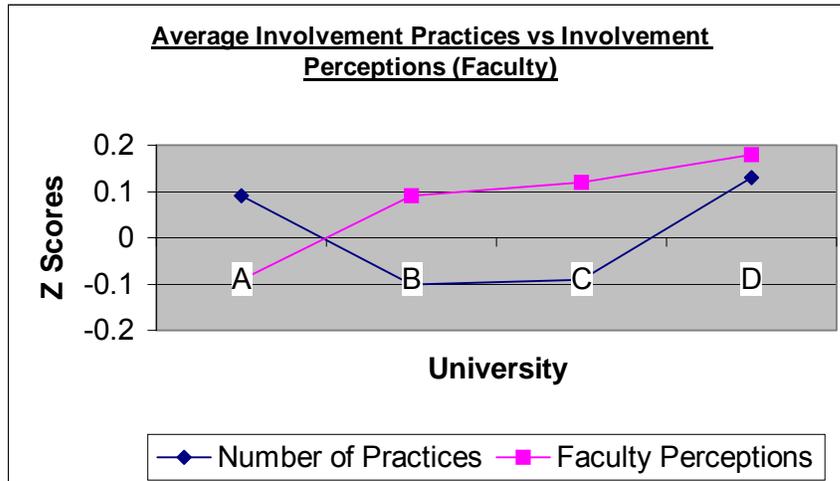
The chart for administrator perceptions of involvement management versus involvement practices is located at Figure 4.4 below. For this employee group, like the faculty group, there is a positive relationship between the number of practices and the level of administrator perceptions. The position of the administrators' perceptions relative to the practices was similar to the faculty's chart. In both cases, the perceptions line were above the practices line. The only difference is that the faculty had one case that deviated from the pattern, where all the administrator perceptions were above the practices line.

Figure 4. 4 – Administrator Involvement Perceptions versus Number of Involvement Practices
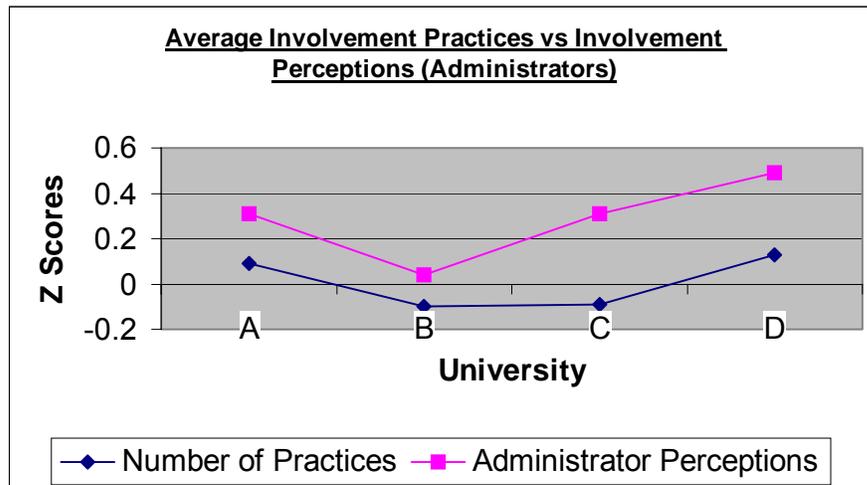
So far, the analysis focused on the individual components of involvement averaged into one composite score and plotted against a composite number of involvement practices. Again, without more institutions to compare scores with, there is no way to tell if these results are a product of random chance or if they can be generalized to other populations. The data pattern revealed that staff perceptions of involvement management were lower, relative to the same number of practices, while faculty and administrators' perceptions were higher. This comparison was done for the entire sample and by each employee grouping in the sample. The next step of the analysis involves comparing the plots of each employee group's perceptions of the individual components of involvement management against the number of practices for that component. These charts are contained in Appendix G.

Charts 1a through 1c of Appendix G plots the results of power related management practices with employee perceptions of that practice for all institutions by analytical grouping. In each of the three charts, the line representing the number of

practices has the same score and the same shape. The line representing perceptions changes shape in each of the three charts.

At all universities, the staff grouping seems to have power scores that are comparatively lower than those of the faculty or administrator groupings. On the other extreme, administrators seem to have consistently higher perceptions of power relative to the number of power practices. The faculty grouping had one case, University A, where the perceptions of power lagged behind the number of power practices but for the most part they followed the pattern displayed by the administrators.

Reward practices and perceptions are plotted on Charts 2a through 2c in Appendix G. Again the pattern of the staff grouping's reward perceptions lagging behind the number of reward practices at each university is replicated. On the faculty side, at all institutions, this grouping has higher perceptions of reward practices compared to the number of reward practices. For the administrators, in all cases but University B, perceptions of rewards was higher than the number of reward practices.

Charts 3a through 3c of Appendix G plots information sharing practices and employee perceptions. Again, the pattern observed in charts 1a and 2a is replicated in Chart 3a. The staff has perceptions that are lower than the scores of the practices. Another recurring pattern was observed with the administrators who, given those same practices, had perceptions of information sharing that had higher Z scores, given the same number of practices. The faculty grouping had a pattern that was similar to the administrators. In all cases but University A, the perceptions of faculty members exceeded the Z scores for the number of practices.

The final component of involvement, knowledge, is charted in Appendix G on Charts 4a through 4c. Once again, the staff grouping's perceptions of knowledge lag behind the number of practices at the institutions. In looking at the faculty grouping's responses, they tend to take on the same pattern as the staff, which is a departure from the other charts where they tended to mirror the administrator's grouping. Again, the administrators' perceptions of knowledge exceeded the Z scores on the number of practices.

In looking across all of the charts, can any recognizable pattern be observed? One observation is that the support staff group consistently has lower perceptions on each of the components of involvement relative to the number of practices provided. Another clear observation is that managers, in all cases but one, have perceptions of the components of involvement that are higher than the relative number of practices provided. Faculty perceptions of involvement components were mixed. In most cases, faculty tended to mirror the administrator pattern and had perceptions that were higher relative to the number of practices. When it came to the knowledge component, faculty mirrored the staff group and had lower perceptions relative to the number of practices.

This section used graphing techniques to analyze data collected in support of the hypothesized relationship between the number of involvement practices and employee perceptions of involvement management. The next section will also use charts to visualize the relationship between employee perceptions of involvement management, organizational commitment and organizational effectiveness.

The second instance where graphical analysis is appropriate is the case of hypothesis three. This hypothesis posits a relationship between perceptions of involvement, perceptions of organizational commitment and measures of organizational effectiveness. Charts are constructed to compare the three variables in the hypothesis. The variables are plotted using the following measures; composite scores of the average Z scores of survey responses to the components of involvement (power, rewards, information, and knowledge), the average Z scores of survey responses on organizational commitment, and the institution's ranking on common performance indicators. Performance indicator rankings are in inverse order. The university scoring the highest on a particular indicator will be assigned a rank of four, while the university scoring the lowest will be assigned a rank of one.

Since the Agency employs 24 separate performance indicators, 24 charts are constructed. These charts are presented in Appendix H. The scores for the components of involvement (PRIK) and the scores for organizational commitment (OC) will be constant on each chart, while the rankings on each performance indicator (PI) will vary. Analysis will concentrate on the detection of any recurring patterns in the rankings.

Due to the large number of performance indicators utilized, it is difficult to visually detect any recurring patterns among the 24 PI charts. A good place to start the analysis is to do a count of the rankings for each university on each of the performance indicators. This will be accomplished by simply counting how many times each university finished first, second, third or fourth in the PI rankings and then comparing these to their rankings on PRIK and OC scores. The reasoning behind this type of

analysis is that if hypothesis three were true, then rankings of PRIK and OC scores

should be good predictors of rankings on PIs. Higher PRIK and OC scores should

translate into higher rankings on PIs.   Table 4.8, which is based on the Appendix H

charts for performance indicators 1 through 24, summarizes each university's rankings

on the various measures and compares them to their rankings on PRIK and OC.

Table 4. 8 – Summary of Power, Rewards, Information, Knowledge (PRIK), Organizational
Commitment (OC), and Performance Indicator (PI) Rankings

	PRIK Rank	OC Rank	Number of PI First Place Rankings	Number of PI Second Place Rankings	Number of PI Third Place Rankings	Number of PI Fourth Place Rankings
University A	3	4	5	6	6	7
University B	4	3	2	10	5	7
University C	2	2	11	4	5	4
University D	1	1	6	4	8	6
Total Possible Placings			24	24	24	24

Table 4.8 reveals that Universities D and C had the highest relative rankings of Z

scores for both PRIK and OC. These two accounted for 71% of the possible first place

finishes (17/24), with University C having most (45%) of the first place finishes. The

second place finishes were dominated by the universities that had the lowest PRIK and

OC rankings. Universities A and B had the lowest Z scores for PRIK and OC yet

accounted for 67% of the second place finishes (16/24). The third and fourth placings are

more evenly spread out between all the universities.   Universities C and D had a majority

of the third place finishes (13/24), while Universities A and B had a majority of the

fourth place finishes (14/24). But in both cases, the difference between the number of

placings of the high ranking PRIK/OC universities (C and D) and the low ranking ones

(A and B) is small, thus the majorities are slight.

Figure 4. 5 – Composite Performance Indicator Scores
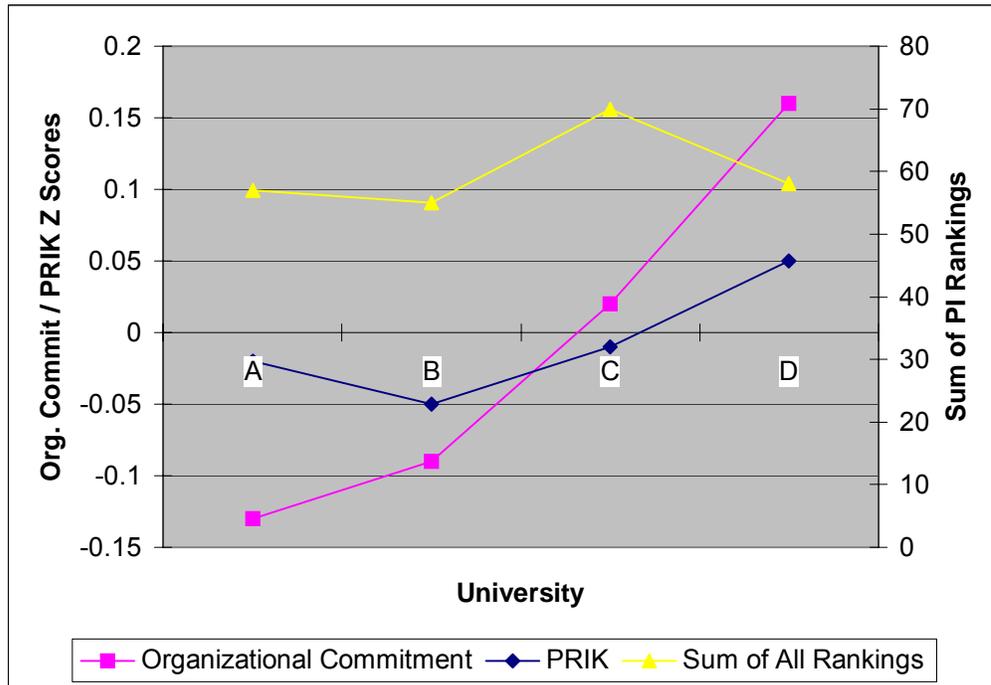
Another way to look at the data is to compute a composite score for each

university for all Performance Indicators and to then overlay that data against the PRIK

and OC Z scores. The composite PI score was computed by adding all the points

assigned to a ranking on each PI (four points for each first place, three points for each

second place, etc.) This simple additive index of PI rankings serves as an overall

composite score of effectiveness. Figure 4.5 above illustrates this relationship. This

chart shows that University C clearly scored the most points on the PIs while the other

Universities were within a few points of each other, with University D slightly ahead of

Universities A and B.   Universities D and C had the highest Z scores for PRIK and OC and finished with the second highest and highest PI scores respectively.

The analyses performed above consider either single PIs or some type of composite score of PIs. Another useful analysis would involve assessing the relative rankings on the most important performance indicators. As illustrated previously in Table 3.3, the Agency rewards individual universities, in the form of supplemental funding, for outstanding performance on certain key PIs. These reward funded performance indicators are grouped together under a common theme. These themes are Student Advancement, Financial and Diversity. Table 4.9 presents a summary of rankings for PRIK, OC, and the PIs for which the Agency provides funding for top performers. The rankings for each group of reward funded PIs were determined by adding all of the points assigned to each placing on the individual PIs (i.e. 4 for first, 3 for second, etc..) comprising each group.   In some cases, two universities had the same aggregate points and were thus tied. (See Universities B and D on the Student Advancement PIs and Universities A and B on the Financial PIs.)

In reviewing the data in Table 4.9, University D had the highest rankings on PRIK and OC scores, and they also did relatively well on the financial PIs and the Student Advancement PIs. But they finished last on the Diversity PIs. University C finished second on PRIK and OC scores, and they were first on the Student Advancement PIs and the Diversity PIs but last on the Financial PIs. Though Universities A and B were either third or fourth place on PRIK and OC scores, they mostly had second or third place finishes on the Financial PIs and Diversity PIs. University B also finished second on the Advancement PIs, but University A finished last.

Table 4. 9 – Summary of Power, Rewards, Information, Knowledge (PRIK), Organizational Commitment (OC), and Reward Funded Performance Indicator (PI) Rankings

	PRIK Rank	OC Rank	Ranking on Student Advancement PIs	Ranking On Financial PIs	Ranking On Diversity PIs
University A	3	4	4	2	2
University B	4	3	2	2	3
University C	2	2	1	4	1
University D	1	1	2	1	4

Graphical depictions of the data in Table 4.9 can be seen in Appendix H, Charts 1 through 3. Since the PRIK and OC scores are constant on charts 1 through 3, it is interesting to note the relative shape of the PI line. The line does not take a similar shape across the three graphs. The two universities that scored highest on PRIK and OC dominated the first place rankings, but beyond that, the second, third and fourth place rankings were spread out among all universities.

Summary of Graphical Analysis

This section on graphical analysis was concerned with using visual displays of the data in order to observe relationships between variables drawn from a small N population. Variables in hypothesis one were plotted on charts that had a constant number of involvement management practices versus varying employee perceptions of involvement management. The findings indicate that generally, support staff perceptions of involvement management lagged behind the perceptions of faculty and administrators given the same number of practices.

Variables in hypothesis three were plotted on charts that compared rankings on various performance indicators to constant scores of organizational commitment and the components of involvement management (power, rewards, information, and knowledge.) The findings revealed that high scores on organizational commitment and on the components of involvement did not necessarily translate into consistently high scores on performance indicators.

Discussion

So far, this chapter has concentrated on presenting the results of a variety of analytical techniques applied to the data for a variety of purposes. Some of these techniques concentrated on describing the data and how reliable it was. Other techniques focused on the predictive capacity of the model. Charts were used to provide a rudimentary analysis of the relationships between variables in the small data set. The next sections will draw upon these analyses in order to evaluate the research hypotheses.

Hypothesis One

The first hypothesis stated that organizations with a larger number of involvement practices will have employees with higher perceptions of power, rewards, information and knowledge in all organizational units. If hypothesis one were true in all cases, a positive relationship between employee perceptions of involvement practices and the number of involvement practices would be expected to be observed. Employees of universities with more high involvement practices would have higher employee perceptions of involvement management. In other words, perceptual measures would vary little between the three employee groups. In order to evaluate the hypothesis,

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graphical analyses of the data were performed that plotted average Z scores of the number of involvement practices against employee perceptual measures of each component of involvement (power, rewards, information, and knowledge) as well as against an overall average PRIK score. (See Appendix G)   If hypothesis one were true in all cases, the lines on the charts representing perceptions and practices between universities should exhibit two characteristics; 1) the lines should roughly resemble each other in shape; 2) the lines should maintain the same relative position across all employee groups. In the case of the first characteristic, if the two lines are similar in shape, then there would be a match between the higher numbers of practices and higher perceptions of those practices. Conversely if the opposite were true, where higher numbers of involvement practices were negatively associated with rank order, then the lines on each chart would be mirror opposites.   In the case of the second characteristic, the relative positioning of the lines is an indicator of the effectiveness of the practices for comparative purposes. By keeping the practices line static for all three analytical groupings, a measure of the effectiveness of the practices on each group can be seen by comparing the perception lines. In looking at the data patterns on the charts in Appendix G, some general statements pertaining to this particular set of data can be made.

The analysis focusing on the relationship between overall average PRIK scores and the number of involvement practices provides little support for hypothesis one.   The universities with the most involvement practices do not consistently have employees with the highest perceptions of the components of involvement management.   The pattern for the administrators (Appendix G, Table 5c) would support hypothesis one since the two lines are similarly shaped, but this pattern is not replicated in the other analytical

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groupings.   The charts for the staff and faculty groupings had mixed results. The faculty

group's perceptions (Appendix G, Table 5b) were in the same relative position as the

administrators (i.e. above the practices line), but the perceptions line did not approximate

the shape of practices. The staff's chart (Appendix G, Table 5a) had the perceptions line

resembling the practices line, but it was placed below. The interesting revelation is how

similar the groupings are across universities. This is evidenced by the observation that

the staff grouping always had lower perceptions, relative to the same number of practices,

than faculty or administrators.

The next analysis of the data focused on the relationship between each individual

component of involvement and the number of practices provided.   Hypothesis one

predicts that universities providing the most practices pertaining to a specific component

of involvement should have employees with the highest perceptions regarding that

component. A review of the charts (Appendix G, Charts 1a-4c) reveals that within each

individual component of involvement there was little similarity in the patterns between

analytical groupings. On each component (Appendix G, Charts 1a – 4a), staff perceptions

consistently lagged behind faculty and administrators and were placed below the

practices line. With the exception of rewards (Appendix G, Chart 2c), on each individual

component of involvement, the administrators' perceptions roughly resembled the

practices line and were positioned above it. The faculty perceptions line generally did

not approximate the practices line for power (Appendix G, Chart 1b) and information

(Appendix G, Chart 3b). On the knowledge chart (Appendix G, Chart 4b), the faculty

perceptions line was actually placed below the practices lines. Data from the

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administrator group may indicate support for hypothesis one, while data from the faculty group are mixed, and data from the staff group definitely do not.

Again, it is interesting to note the relative positioning of the data points for the employee groupings. For the most part, faculty and administrators' perception scores tend to be higher than the practice scores while staff's scores tend lie below the practice scores. The only exception is the knowledge component, which has the perception scores of faculty and staff lying below the practices line.

In summary, the data set here provides little support for hypothesis one. The provision of a higher number of involvement practices did not seem to result in higher employee perceptions of involvement for all employee groups. Given the same number of practices, both faculty and administrators tended to have higher perceptions than staff. The only exception to this was faculty on the knowledge component. Administrators were the only group whose perceptions lines were similarly shaped to the practices lines. Except for power, the staff group had similarity in their perceptions and practices lines, but the perceptions were placed below the practices. Faculty results were mixed, with some perception lines lying below the practice lines and no consistent similarity in line shapes.

Hypothesis Two

Hypothesis two predicts that higher perceptions of power, rewards, information and knowledge will relate to higher levels of organizational commitment. Survey data were collected to measure these variables and then regression analysis was used to evaluate the hypothesis. Based on the regression results, there is strong support for

hypothesis two at the aggregate sample level, at the total employee grouping level and at the university level, but that support weakens as the regression is performed at each employee grouping at each university. Table 4.10 is a simplified table of all significant independent variables and their corresponding partial betas for each analytical unit and will be referred to in the discussion of the findings for hypothesis two. (Appendix F contains regression results for each university.)

As previously presented earlier in Table 4.7, at the sample level, all four variables were significant and positively correlated with organizational commitment and accounted for nearly 50% of the dependent variable's variance. The variables with the strongest correlations and highest partial betas were power, rewards, and information. This combination was significant at all four universities. For universities A, C and D, the tables in Appendix F show that the power, rewards, and information variables together accounted for over 50% of the variation in organizational commitment.

In comparing the order of strength of the variables at the sample and university levels in Table 4.10 below, rewards always has a stronger effect than information and knowledge. Where the power variable lies is what differentiates the various levels. At the sample level, the effect of the power variable lies between the effect of rewards and information. At universities A and C, power has a greater effect than both rewards and information, while at universities B and D, power has less influence on organizational commitment than rewards and information. When significant, the knowledge variable consistently has the weakest influence on organizational commitment. Knowledge was not significant at Universities B and C.

Table 4. 10 - Rank Order of Partial Betas for Significant Variables by Employee Group

Sample:		Staff:		Faculty:		Administrators:	
Rewards	.44	Rewards	.46	Power	.50	Power	.47
Power	.42	Information	.46	Rewards	.49	Rewards	.41
Information	.35	Power	.40	Information	.36	Information	.30
Knowledge	.12			Knowledge	.23	Knowledge	.14
University A:		**Univ. A Staff:**		**Univ. A Faculty:**		**Univ. A Admin:**	
Power	.52	Rewards	.48	Power	.59	Power	.59
Rewards	.42	Power	.48	Rewards	.49	Knowledge	.37
Information	.27	Information	.38	Information	.28	Rewards	.27
Knowledge	.21	Knowledge*	.24	Knowledge*	.22		
University B:		**Univ. B Staff:**		**Univ. B Faculty:**		**Univ. B Admin:**	
Rewards	.44	Rewards	.45	Rewards	.68	Power	.51
Information	.38	Information	.43	Information	.65	Information	.36
Power	.23					Rewards	.29
University C:		**Univ. C Staff:**		**Univ. C Faculty:**		**Univ. C Admin:**	
Power	.49	Power	.47	Power	.59	Rewards	.46
Rewards	.43	Rewards	.40	Rewards	.43	Information	.40
Information	.29	Information	.36			Power	.31
University D:		**Univ. D Staff:**		**Univ. D Faculty:**		**Univ. D Admin:**	
Rewards	.47	Information	.54	Rewards	.48	Power	.42
Information	.43	Rewards	.42			Information	.39
Power	.36	Power	.39			Rewards	.36
Knowledge	.14						

Note: All variables are significant at the .01 level or lower, except those indicated by * which are significant at the .02 level.

In looking at each analytical grouping at the sample level on Table 4.10, the combination of power, rewards, and information being significant and positive is again replicated. As shown earlier in Table 4.7, these three variables account for over 51% of the variation in organizational commitment at the faculty and administrator level, with 43% at the staff level. While power, rewards, and information are significant and positive at these aggregate levels, it is interesting to note that the order of the strength of the relationships is different for each group. Faculty and administrators' level of

organizational commitment seems to be determined more by power and rewards, whereas the staff's level of commitment seems to be determined by rewards and information. Again, the relationship between knowledge and organization commitment is weak, but it is significant for the faculty and administrator groups.

When the regression was applied to the data at the analytical grouping level at each university, the results revealed that the support for hypothesis two varied for each group, as there was no consistent pattern of significant variables. Table 4.10 reveals that rewards is the only common significant variable in explaining organizational commitment for every analytical grouping at the university level. There are different combinations of variables that were significant across each analytical grouping.

In the case of the staff grouping, the variables rewards and information are significant at all universities. Rewards had a stronger effect on organizational commitment at all universities except D. The power variable was significant at three of the four universities. Power had the strongest effect on organizational commitment at universities A and C, but it was the weakest variable at university D. Knowledge was only significant at university A, where it was the weakest predictor.

At the faculty grouping, rewards is a significant predictor variable of organizational commitment at all universities. Other significant variables that accompany rewards ranges from all at university A to none at university D. Power is the strongest significant variable at universities A and C. At university B, information is the only other significant variable, but it has less predictive effect than rewards. At university A, information and knowledge are significant but both have less predictive effect than power and rewards. Knowledge is the weakest predictor at university A.

Power and rewards are common, significant variables at all universities for the administrator grouping. Power is the strongest predictor at universities A, B, and D. At those same universities, rewards is the weakest predictor variable. At university C the situation is reversed, where rewards is the strongest predictor and power is the weakest. Information is the middle variable in terms of its influence on organizational commitment at universities B, C, and D, while knowledge occupies that position at university A. Knowledge is only significant at university A.

In summation, hypothesis two received strong support at the total sample level and at the employee group level. Of the four variables in the hypothesis, power, rewards, and information were significant at both levels. Together they explained roughly 50% of the variance in organizational commitment at the sample level and nearly 55% of the variance at the faculty and administrator grouping. These variables explained 43% of the variation in organizational commitment at the staff level. The knowledge variable was significant at the sample level and at the faculty and administrator groupings but it generally had much less predictive power. In looking at each university and at each employee grouping at each university, support for the relationship lessens. There was no predominant combination of significant predictor variables. The patterns of variables varied in terms of significance and in terms of their relative strength as predictors of organizational commitment.

Hypothesis Three

Hypothesis three posits a relationship between organizational commitment, involvement management, and organizational effectiveness. In order to evaluate the

hypothesis, charts were constructed that compared data points on involvement

management (PRIK), organizational commitment (OC) and the relative rankings on 24

common performance indicators (PI).   The charts were constructed so that university

PRIK and OC scores were static on each chart, but the PI rankings by university were

allowed to vary. In order to make sense of the 24 charts that were produced (one for each

PI), a table was constructed that compared the number of 1st, 2nd, 3rd, and 4th placings

each school had to their PRIK and OC scores. (see Table 4.8).

   If hypothesis three were true, it would be expected to find that the universities

with high PRIK and OC scores would have a higher number of first and second place

finishes than the universities with lower PRIK and OC scores. Table 4.8 reveals that two

universities (C & D) had the highest PRIK and OC scores and had over 70% of the first

place finishes. The schools with the two lowest PRIK and OC scores had 67% of the

second place finishes. Beyond that, the placings are evenly spread out among all four

institutions. Thus the results of this level of analysis do not support hypothesis three for

this particular data set.

   Another level of analysis performed on the data for hypothesis three focused not

on all performance indicators, but only on the ones that are rewarded by the Agency. The

Agency grouped selected PIs based on a common theme and provided additional funding

as a reward to the universities that scored highest. The PI themes were Student

Advancement, Financial, and Diversity. Table 4.9 summarizes rankings on PRIK, OC

and the reward-funded PIs.   Universities C and D had the highest PRIK and OC ranks

and between the two they had all the first place finishes, but each had a last place finish

as well. The Universities with the lowest PRIK and OC ranks, A and B, had most of the

second place finishes and only one last place finish. Based on these patterns of rankings, this table does not provide evidence that supports hypothesis three.

The final level of analysis centered around the idea of using an additive index of the rankings on all PIs as a composite score of effectiveness. Figure 4.5 plotted this composite index score against OC and PRIK scores for each university. The resulting chart had a rather flat looking line for the Sum of PI Rankings, with a slight bump representing University C. The rest of the universities were all hovering around the same composite score. Again, if the hypothesis were true, University D would be expected to have a higher composite score of effectiveness, followed by University C, and then Universities A and B. It is surprising to note that the universities tended to group around the same score. The resulting flat line seems to indicate that this data set does not support hypothesis three.

Summary of Data Analysis

The purpose of this chapter is to draw upon the data analysis in order to evaluate the three research hypothesis.   Since there were only four cases, hypotheses one and three could not be subjected to rigorous statistical analyses, and therefore any finding cannot be generalized to other settings. Graphical techniques were used to visualize relationships between variables and draw conclusions regarding the data set. Hypothesis two was evaluated using multivariate regression techniques, since the relationship was expressed as a predictive equation. In all three hypotheses, analyses were performed at the following levels; by sample level, by employee grouping at the sample level, by university at the sample level, and by employee grouping at each university level.

In the case of hypothesis one, which posited a relationship between higher number of involvement practices and higher perceptions of the components of involvement management (power, rewards, information, and knowledge), there was little support. Higher number of involvement practices did not necessarily translate into higher perceptions of power, rewards, information, and knowledge for all organizational elements. For this data set, higher number of practices generally resulted in higher perceptions for faculty and administrators. Staff perceptions consistently lagged behind those of faculty and administrators.

For hypothesis two, a relationship was posited between organizational commitment (OC) and the components of involvement management: power, rewards, information, and knowledge (PRIK). The results of the analysis provides support for the hypothesis in that all four variables were significant at the sample level and at the faculty and administrator groupings. At the staff grouping, all variables except knowledge were significant. As the regression was performed at various levels, different combinations of the reward-power-information variables were significant for different groups, thus eroding support for the hypothesis in general. In looking at the regression results at the university level, the variables of power, rewards, and information are significant at all universities and explained over 50% of the variation in organizational commitment in three of these universities. The rank order of the variables in terms of predictive strength differs at each university, though power or rewards is usually the strongest predictor with knowledge always being the weakest. In comparing the employee grouping levels at each university, support for the hypothesis weakens. Generally, power and rewards are the most common significant variables for faculty and administrators but they greatly

vary in terms of relative strength. Rewards and information are the most common

significant variables for the staff grouping, but again there is great variability in their rank

order of predictive strength.

In the case of hypothesis three, there was no support in the data set. The projected

relationship between organizational commitment, the components of involvement

management, and effectiveness was not observed in the data set. High rankings on a

variety of performance indicators, either individually or grouped by a common theme, did

not cluster around the universities that had the highest scores on PRIK and OC. A

composite score of all performance indicator rankings seem to indicate that the

universities were all hovering around the same score, which indicates that there is no

relationship between OC, PRIK and PIs at all for this data set.

This chapter evaluated the specific hypotheses in light of the evidence collected.

The next chapter will take a higher level-view of what was learned from this research

project and discuss the limitations inherent in the design of this project. The next chapter

will then conclude with suggestions for future avenues of research.

CHAPTER 5 – CONCLUSIONS

This dissertation reports results of an effort to apply Lawler's model of factors contributing to high involvement in a higher education setting, specifically in a state university system. An additional factor, organizational commitment, is added to the model in order to gauge its' effect on the model's relationship between high involvement and organizational effectiveness.

This research posed three questions. What is the relationship between high involvement practices and perceptions of degrees of employee involvement? What is the relationship between the perceptions of involvement and organizational commitment? What is the relationship between involvement, organizational commitment, and organizational effectiveness? This research project proposed three hypotheses and then collected data in order to evaluate these research questions. At this point of the project, it is appropriate to take a step back from the detailed data analysis and determine what contribution to knowledge was made. The first section of this chapter discusses this project's three conclusions, its contribution to the broader body of organizational theory knowledge and its practical applications. And as a corollary to these subjects, it is also appropriate to talk about the limitations of this research project. This will be the topic of

section two. And finally, suggestions for future research will be covered in the last

section.

Contribution to Organizational Theory Knowledge and Practical Applications

The first conclusion of this study is that a greater number of involvement

practices does not necessarily lead to greater perceptions of involvement. The data

analysis section found that overall, the universities did not engage in a large number of

involvement practices. Of the individual components of involvement, information

sharing was the most wide-spread practice, with the universities sharing information with

up to 60% of the employees. Power, rewards, and knowledge practices were provided to

less than 40% of the employees. This is consistent with Lawler's previous research on

the Fortune 1000 firms, which revealed that information sharing practices were the most

popular involvement strategy of the four. (Lawler, Mohrman, and Benson 2001, pp. 29-

53). The effect of the involvement practices provided by the universities on the

perceptions of the employees seemed to depend upon their level. Perceptions of

information sharing, despite it being the most widely used practice, did not have the

highest scores among the employee groups. All employee groups did report feeling

between some and quite a lot of power, despite power sharing practices not being widely

used. This could be indicative of the shared governance culture found in higher

education. Blau wrote that in academic organizations, there can be two sources of

authority and influence, bureaucratic and professional. (1994, pp. 158-161) Blau states

that bureaucratic authority and influence, which resides in the position, is most

commonly associated with people in administrative offices. On the other hand,

professional authority and influence is based on knowledge and is more associated with faculty members. This could help explain why members in all three groups perceived themselves as having some power over their working lives. Administrators, and to some degree the support staff, have power that results from their control over resources and the procedures to access those resources. On the other hand, faculty have specific knowledge of their particular field and have the power to determine their own classroom and research agendas.

As far as practices versus perceptions goes, there were definite gaps between the faculty and administrators groupings and the support staff group. Given the same number of practices, the staff perceptions were consistently lower than both the faculty and the administrators. A possible explanation for this could lie in the target of the involvement practices. Data were collected only on management estimates regarding the number of involvement practices provided. None were collected on either to whom the involvement practices were available nor on how those practices were implemented. The support staff could have either been unaware of the involvement practices or excluded from their implementation.

From a narrow theoretical perspective, the results of this project can help refine and verify some of the key assumptions in Lawler's involvement management model. One of Lawler's main assertions about high involvement organizations is that they essentially must be built from scratch. (Galbraith and Lawler 1993, pp. 298-299) He claimed that traditional hierarchies had power, rewards, information and knowledge concentrated in the top levels of the organization and this condition tended not to change unless the entire organization design strategy changed. The broader research question

posed in this project asked if this assertion was true in all cases, especially in a setting

that was considered to be more participative in the first place. Did the most effective

organizations in the traditionally more participative sector of higher education, have

power, rewards, information, and knowledge spread throughout the organization? The

results of this project partially support Lawler's assertions. The findings have shown that

there is a clear distinction between the perceptions of support staff and the other two

employee groupings on power, rewards, information and knowledge. This relationship

was observed for all four universities, which implies that even the most effective

university still had this perceptual gap between analytical units. It appears that in this

instance, Lawler's assertion of the concentration of the elements of involvement at top

levels of the hierarchy is true, even in more participative environments.

The second conclusion of this project is that there is a link between involvement

practices and organizational commitment. For this study group, all the elements of

involvement were positively associated with organizational commitment and were

significant. However, in looking at the spread throughout the organization, the variables

of power, rewards, information and knowledge followed a similar pattern of predictive

strength for faculty and administrators. Though all four variables were significant, power

and rewards had the most predictive power for both faculty and administrators. The

support staff followed a different pattern. For them, rewards and information were the

two strongest predictors of organizational commitment, with power not far behind.

Knowledge was not a factor in determining their commitment.

A refinement to Lawler's model proposed in this research project is the addition

of organizational commitment. This was hypothesized to be the missing link between the

components of involvement (power, rewards, information, and knowledge) and effectiveness. If employees felt they had power, were fairly rewarded, had information about the organizational environment and had knowledge about the technical details of their work, then they would be committed to the organization. It was through this commitment that the organization became effective. This refinement involved two links, the first one links the components of involvement to organizational commitment, the second one links involvement and organizational commitment to effectiveness.

As for the first link, regression results supported the hypothesis that the components of involvement (power, rewards, information and knowledge) were associated with organizational commitment. Power, rewards, information and knowledge were positively and significantly related to organizational commitment. A further refinement of the model was found in that for each level of the organization, organizational commitment could be developed by different combinations of power, rewards, and information. It must also be noted that while these three variables account for 50% of the variance in organizational commitment, there may be additional significant variables that account for some of the remaining variability in commitment.

As far as the second link, between involvement, organizational commitment and effectiveness, results of this study set do not support this hypothesis. The highest measures of effectiveness were not consistently achieved by the universities with the highest scores on organizational commitment and involvement. This is the third conclusion of this project, that there is no link between involvement practices, commitment and organizational effectiveness. The data analysis, though admittedly rudimentary, failed to reveal a clear visual link between these variables. This result could

be attributed to the low level of high involvement practices used by the institutions. Though there was a relatively strong predictive relationship between the perceptions of involvement and commitment, most respondents' scores on the commitment section of the survey indicated that they were only slightly committed to the organizations. In other words, low involvement practices produced lower levels of commitment, which did not produce the motivation required for higher levels of performance. A greater number of involvement practices could have produced higher levels of commitment and thus higher levels of effectiveness.

Another reason for the lack of a link between involvement, commitment, and effectiveness could be the result of the selection of performance indicators. Lawler reported in previous research that in order to be effective, measures of performance should be carefully selected. Ideally, those being measured should participate in the design of the measure to build their acceptance of it as being fair and valid since they had a say in the selection process. (Lawler 1983, pp. 1270-1272) In the present case however, one of the stated reasons the Agency employed performance indicators was to be able to compare themselves to other universities in the United States. Consequently, the Agency uses performance indicators that are already established and recognized in the higher education industry. Thus, for the most part, university employees, other than higher level managers, did not have a chance to participate in the selection of the university wide measures.

Another point to make regarding the lack of a link between organizational effectiveness, involvement and commitment may be related to the level at which the performance indicators are applied. This has to do with what Lawler calls "line of sight."

Lawler states that in order for organizations to be effective, individual efforts, rewards, and organizational results must be clearly linked. (Lawler 1996b, p. 210; Lawler 1983, p. 1274-1278) In other words, the individual must be able to see that the work they do affects the performance of the organization and that when they achieve organizational goals, they are rewarded. In the case of this project, the performance indicators were not tied to any individual's work efforts; they are more applicable to senior level managers' efforts. Thus they might not have been the best way to operationalize organizational effectiveness. Rewards for good performance were delivered in the form of additional funding for the university.   If more direct performance indicators were available, for example ones matching departmental goals to the department members' perceptions of involvement and commitment, a different finding might have resulted.

From a practical point of view, some of the findings of this research project could provide some prescriptive advice for organizational managers. The results of hypothesis two found that each analytical grouping had different combinations of significant predictor variables for organizational commitment. This finding suggests that there are different variables to manipulate in order to develop or maintain organizational commitment for a particular group of employees. For example, support staff would respond to involvement management practices dealing with rewards and information. For faculty and administrators, they would respond more to power and reward related practices.   The results of hypothesis one revealed that staff members consistently have perceptions of the components of involvement management that are lower than that of faculty or staff. This would be a situational factor to consider in designing and delivering

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involvement management initiatives, ensuring that staff members are adequately exposed to involvement practices.

Another practical contribution of this study is the validation of the survey instruments. Though the surveys were originally designed for a manufacturing setting, the factor analysis revealed that each survey section loaded primarily on different factors. The factor loads, combined with the high alpha coefficients for most survey sections, indicate that the survey is measuring what it is designed to measure even when administered in a higher education setting. The only weak part of the survey was the knowledge section, which had very low alphas.

It must be remembered that only the findings from hypothesis two have a sufficient number of cases to support serious statistical analysis. Hypothesis one and three could not be subjected to rigorous statistical analysis because they dealt with issues at high levels in which there were very few cases. Thus generalizations from these conclusions could only be tentative at best. The next section will discuss these and other limitations of the research project

Limitations of Project

As with any social science research project, there are limitations and weaknesses inherent in the design. For this particular research project, these limitations include:

1. Cross-sectional Design at One Point in Time – This project looks at data taken from one point in time. The survey questions were only administered once and the performance indicator data were drawn for only one year. There is no time series data to examine trends.

2. <u>Time Lag Between Performance Indicators and Survey Administration</u> – The surveys were administered to employees in the Fall of 2002. During that time frame, the only available information on performance indicators was from the year ending June 30, 2001.

3. <u>The small "N" problem</u> - This research design looked at only four institutions. This situation precludes some statistical procedures that would allow some general statements to be made about the hypotheses. Thus this project must be considered an exploratory effort and the findings should not be interpreted as being applicable in other situations or industries.

4. <u>Data Collected from Organizations that are not Independent of Each Other</u> – The small number of cases may suggest another problem. This study collected data from organizations that are members of a university system that is under the guidance and control of the same governmental agency. The universities are not truly independent of each other and this could bias the findings. There could be system wide influences that are present but undetected.

5. <u>Use of Promotional Opportunities as Opposed to Compensation for Rewards</u> – In order to gain project approval of one of the unions that was in contract negotiations, it was agreed not to ask questions regarding compensation. Instead, promotional opportunities were used. This substitution could be construed as not being as robust of a measurement of rewards. The results could have been different if the survey questions specifically addressed compensation.

6. <u>Measurement Problems with Knowledge</u> – The survey instrument's measurement of knowledge seems to be problematic. The scale for this survey section was quite different from the Likert-like scales used in other sections and required some recoding to prepare it

for data analysis. This resulted in low alpha values for this section and therefore this variable was excluded from the regression analysis at some levels due to extremely low correlations and lack of significance. A more traditional Likert-like scale may have yielded different results for this variable.

7. Administrator Provided Information on Practices – The information on the types and numbers of involvement practices provided by each institution was based on responses by the administrators. The possibility of having skewed results exists because they would be the ones responsible for implementing any such programs and/or practices. Their perceptions on the availability of such programs and practices may differ from those of faculty and staff.

8. Low Response Rate – The overall response rate of this study was "low," as only 43% of the respondents returned surveys. However, the response rate is typical of results using mailed surveys. None the less, this low rate may decrease generalizability to other situations. For the present study, the response rate may be acceptable because analysis of the sample population revealed that no employee group at any of the universities was systematically underrepresented.

9. Quality of Involvement Practices Not Considered - This project utilized management estimates on the number of involvement practices utilized by the institutions and associated those to employee perceptions of the components of involvement. This project did not investigate the quality of those practices. Poorly designed or implemented involvement practices could have negatively affected perceptions of those programs.

Despite these limitations, this research effort did provide some interesting findings that may merit additional research. These research topics will be covered in the next section.

Future Research Avenues

This research project has identified some potential areas of research that may yield fruitful results in the future. These include:

1. Expand the use of performance indicators for all organizational levels - This research project used performance indicators that applied to the organization as a whole. The use of some type of performance indicators for lower levels would allow the testing of the hypothesis addressing the link between individual perceptions of involvement and organizational effectiveness at lower levels of the organization. Performance indicators at a department level would provide a data set that could link individuals' perceptions with performance indicators specific to them. For example, the Accounts Payable department might be measured by the number of invoices processed and paid daily. The Biology department's effectiveness might be measured by the number of students graduating in four years. Collecting data at this level would allow more rigorous analysis of the relationship between involvement perceptions and effectiveness because it would produce more cases to study.

2. Expand questions on involvement practices to all organizational levels – One of the previously stated limitations of this research project is that only the administrators were asked to provide information on the types of involvement programs and practices. It would be more accurate to ask all organizational members about the types of involvement

programs available to them, and more importantly, how many of them did they actually participate in.

3. <u>Investigate Comparisons Across Sectors</u> – This research project focused on a small part of one activity in the public sector, namely higher education. Future research could focus on comparison with higher education institutions in other sectors, such as purely private, quasi-private (private institutions receiving a substantial amount of state funding for operations), and foreign institutions.

4. <u>Expand comparisons to more universities</u> – The current research project used four institutions due to resource limitations and due to the fact that several universities contacted declined to participate in this study. Future research could use the same research design, but expand it to include a larger number of institutions of a similar nature. This would allow for more rigorous statistical analysis that would allow some generalizable statements to be drawn from the study population. In order to address any possible bias resulting from organizations belonging to or reporting to a common parent organization, any future research should focus on institutions that are independent of each other.

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[2] The actual name of the Agency is not used in order for it to remain anonymous.
[3] ibid.
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APPENDIX A – NONMANAGER SURVEY PACK

October 11, 2002

Dear Agency Employee:

Greetings! My name is Christopher Bowling and I am working on my doctoral dissertation in Public Administration at the Pennsylvania State University. Part of my research project is on employee involvement in work situations.   I have received permission from the Agency Executive, Agency union leaders, and your university to collect data on how employees feel about various work related issues. I would like to please ask for your help in completing my project. Of course your participation is completely voluntary, but I would greatly appreciate the favor of a response.

Your name was randomly selected to receive the enclosed survey. May I ask that you please read the enclosed instructions and fill out the survey? It will take approximately 20 minutes to complete. When finished, could you please return the survey in the postage-paid envelope provided **_and_** then separately mail the enclosed pre-stamped postcard by **October 25, 2002**?   The postcard is only for tracking response rates, not so I can match names to survey responses. Please be assured that **_NO ONE_**, including me, will ever be able to match your survey responses to your name. All survey data will be anonymous. Only aggregated responses will be reported to interested parties.

Pennsylvania State University research policy also requires me to provide you with additional information on this project. This is contained on the enclosed Informed Consent letter. This form is for your records. Please read this form and feel free to contact me if you have any questions about this project.

If you would be interested in the results of my study, a copy of the final report will be available at http://hometown.aol.com/cabowl/myhomepage/business.html. The report will be available in the second quarter of 2003.

I want to thank you in advance for your valuable assistance on this research project. I appreciate your help in completing my degree, which I could not do without your help!

Sincerely,

Christopher A. Bowling

Most of the questions in this survey ask that you circle one of several numbers that appear under or to the right of the item. You are to choose the one number that best matches the description of how you feel about the item.

For example, if you were asked how much you agree with the statement "I enjoy the weather here," and feel that you agree, circle the number under Agree like this:

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree
I enjoy the weather here ……………..	1	2	3	4	⑤	6	7

Note that the response choices may be different in different parts of the questionnaire. For example, they may ask not whether you agree or disagree, but perhaps whether you are satisfied or dissatisfied, or whether you think something is useful or not, etc.

So please be sure to read the special instructions that appear on each page and to read the response choices before choosing your answers. This is NOT a test. There are no right answers, just your candid opinion.

If the content of the question is not at all relevant to you or your job, please write N/A as your response. Do this only if absolutely necessary, as N/A on an item may cause some of your other choices to be excluded from analyses.

When you have finished, please place the questionnaire in the postage paid return envelope provided and return your completed survey to the address indicated. Also please return the pre-stamped post card, which is used only to track response rates, not to match names to survey data. ***Please return the survey and post card by October 25, 2002.***

Please be assured that **<u>NO ONE</u>**, including me, will ever be able to match your name to your responses.

Thank you for your assistance.

Please see the reverse side for the Informed Consent Statement

INFORMED CONSENT FORM FOR
BEHAVIORAL AND SOCIAL SCIENCE RESEARCH
The Pennsylvania State University

Title of Project: Involvement Management and Effectiveness in Higher Education

Principal Investigator: Christopher A. Bowling,
                Telephone; (XXX) XXX-XXXX email: xxxxxxxxx

Advisor: Dr. Rupert Chisholm,
       School of Public Affairs, Department of Public Administration
       The Pennsylvania State University – Harrisburg
       777 W. Harrisburg Pike, Middletown, PA 17057
       (717) 948-6050

1. <u>Purpose of this study</u>: To see if effective organizations have a greater number of committed employees.

2. <u>Procedures to be followed</u>: You will be asked to complete 65 questions on a survey.

3. <u>Discomforts and Risks</u>: None beyond those experienced in everyday life.

4. <u>Benefits</u>: Society will benefit from this research project through improved organizational management knowledge.

5. <u>Duration</u>: It will take 20 to 30 minutes to complete the questions.

6. <u>Statement of Confidentiality</u>: No one, including the principal investigator, will be able to identify your responses on the survey. You will be asked to return two things: the completed survey and a prepaid postcard. The survey will have no identifying markings on it. The postcard will have a code on it and will only be used by the principal investigator to track response rates. Please mail the survey and the postcard separately. The principal investigator will not be able to match your name to the survey you filled out and sent in.

7. <u>Right to Ask Questions</u>: You can ask any questions about the research. If you have questions, please contact Christopher A. Bowling at (XXX) XXX-XXXX (email: XXXXX@XXX.com)

8. <u>Voluntary Participation</u>: You do not have to participate in this research project. You do not have to answer any questions you do not want to answer. The completion and return of the survey indicates that you have given the principal investigator your consent to be included in this research project.

9. <u>Age</u>: You must be 18 years of age or older to participate in this research study.

SECTION A   OUTCOMES

How much do you agree or disagree with each of the following statements?						
	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree

1. All in all, I am satisfied with my job ………….   1   2   3   4   5   6   7

2. I am willing to put in a great deal of effort beyond
what is normally expected in order to help this
organization be successful …………..…………   1   2   3   4   5   6   7

3. I feel I can trust the people in this organization ...   1   2   3   4   5   6   7

4. I am familiar with all aspects of work done in my
work group …………...…………..………….   1   2   3   4   5   6   7

5. I talk up this organization to my friends as a great
organization to work for …………..………….   1   2   3   4   5   6   7

6. I will probably look for a new job in the next year.. 1   2   3   4   5   6   7

7. In general, I don't like my job …………………...   1   2   3   4   5   6   7

8. People here feel you can't trust this organization ..   1   2   3   4   5   6   7

9. I find that my values and the organization's values
are very similar …………………………………...   1   2   3   4   5   6   7

10. I know how the work of my group fits with the
work of other groups …………………………   1   2   3   4   5   6   7

11. In general, I like working here ………………….. 1   2   3   4   5   6   7

12. This organization will take advantage of you if
you give it a chance …………………………...   1   2   3   4   5   6   7

13. There is not too much to be gained by sticking
with this organization indefinitely ……………… 1   2   3   4   5   6   7

14. When the management of this organization says
something, you can really believe it is true ……...   1   2   3   4   5   6   7

15. This organization really inspires the very best in
me in the way of job performance ……………… 1   2   3   4   5   6   7

How well informed are you about the following?

	Not at all Informed	Slightly Informed	Somewhat Informed	Informed	Very Well Informed
1. The Agency's goals ………………………	1	2	3	4	5
2. The Agency's operating results ……………..	1	2	3	4	5
3. Your university's goals ……………………...	1	2	3	4	5
4. You university's operating results …………....	1	2	3	4	5
5. Your department's goal ………………………	1	2	3	4	5
6. Your department's performance ……………...	1	2	3	4	5
7. New technologies that may affect you ………..	1	2	3	4	5
8. Business plans that may affect you ……………	1	2	3	4	5
9. Jobs and career opportunities ………………….	1	2	3	4	5
10. Competitor universities' relative performance ..	1	2	3	4	5

SECTION C   GENERAL REWARD ATTITUDES

How much do you agree or disagree with each of the following statements about promotional opportunities?

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree
1. My promotional opportunities depend almost entirely on how well I perform my job ………...	1	2	3	4	5	6	7
2. My promotional opportunities depend on the success of my university ………………………	1	2	3	4	5	6	7
3. My promotional opportunities are fair given the promotional opportunities my co-workers have..	1	2	3	4	5	6	7
4. I am very happy with my promotional opportunities ………………………………	1	2	3	4	5	6	7

5. My promotional opportunities are determined by
   the success of my university …………………... 1 2 3 4 5 6 7

6. My promotional opportunities are fair compared to
   the promotional opportunities of others in my
   university …………………………………………. 1 2 3 4 5 6 7

7. Considering my skills and effort, I am very
   satisfied with my promotional opportunities …… 1 2 3 4 5 6 7

8. Promotional opportunities around here depend on
   how well you perform …………………………... 1 2 3 4 5 6 7

9. Promotional opportunities are tied to university
   performance …………………………………….... 1 2 3 4 5 6 7

10. My promotional opportunities are fair considering
    the opportunities that other people have at this
    university ………………………………………….. 1 2 3 4 5 6 7

11. My promotional opportunities are determined by
    my individual job performance ………………… 1 2 3 4 5 6 7

12. My promotional opportunities are determined by
    my department's job performance ……………… 1 2 3 4 5 6 7

How much do you expect each of the following to be in determining your promotional
opportunities over the next twelve months?

| | | To Some | | To a Large | To a Great |
| | Not at All | Extent | | Extent | Extent |

13. Your individual job performance ……………... 1 2 3 4 5 6 7

14. Your department's performance ……………... 1 2 3 4 5 6 7

15. The performance of your university ………….… 1 2 3 4 5 6 7

16. The performance of the Agency ……………… 1 2 3 4 5 6 7

How much influence do you have over decisions about each of the following?

	No Influence At All	Very Little Influence	Some Influence	Quite A Bit of Influence	A Great Deal of Influence
1. The way your work is done ………………………	1	2	3	4	5
2. Ways of improving productivity ………………	1	2	3	4	5
3. Quality of your work environment ……………	1	2	3	4	5
4. Quality of your work …………………………..	1	2	3	4	5
5. Planning and scheduling of your own work …..	1	2	3	4	5
6. Your department's costs ………………………	1	2	3	4	5
7. The time it takes your department to get things done ……………………………………………...	1	2	3	4	5
8. The flexibility of your department's operations..	1	2	3	4	5
9. The level of coordination between your university's departments ……………………………………	1	2	3	4	5
10. The goals and performance standards of your job ………………………………………………	1	2	3	4	5

During the past three years, have you received formal training in the following areas? If yes, has your training in this area been adequate to meet your needs?

	Formal Training Received?			Has Training Been Adequate?	
	Yes	No	Don't Know	Yes	No
1. Group problem-solving and decision-making..	1	2	3	1	2
2. Leadership and management skills ………….	1	2	3	1	2
3. Skills in understanding business (e.g. accounting, finance) …………………...	1	2	3	1	2
4. Quality analysis or statistical control processes …………………………………	1	2	3	1	2
5. Technical skills required to do your job ……...	1	2	3	1	2
6. Cross training in skills required to do other jobs	1	2	3	1	2

In this section we ask a number of questions about your background. This information will allow comparisons among different groups of employees and comparisons with similar groups of employees in other organizations.

All of your responses are strictly confidential. Individual responses will not be seen by anyone at your university or the Agency. We appreciate your help in providing this important information.

1. Are you (please circle):

    1. Female   2. Male

2. a) How many years have you worked for your University? (Round off to nearest year; if less than 6 months, put "0")

    _____ years

    b) How many years have you worked in your current position?

    _____ years

3. **How old were you on your last birthday?**

    1. 29 and under   4. 50 to 59

    2. 30 to 39   5. 60 to 69

    3. 40 to 49   6. 70 and over

4. Are you (please circle):

    1. African-American

    2. Asian

    3. American Indian

    4. Hispanic

    5. White

    6. None of the Above

5. What university are you employed by?

    1. University A   3. University C

    2. University B   4. University D

6. What is your current level of education? (please circle)

    1. Elementary School

    2. Some High School

    3. Graduated High School or GED

    4. Some college or technical training past high school

    5. Graduated from college (bachelor's degree)

    6. Some graduate school

    7. Graduate Degree (Masters, PhD)

7. What category below does your job best fit in?

    1. Academic Instruction

    2. Academic Support

    3. Institutional Administration

    4. Information Technology

    5. Physical Plant/Maintenance

    6. Student Affairs/Services

    7. Research

    8. Public Service

8. Please indicate which of the following you are a member or fair share participant of (please circle):

    1. Union A   5. Union E
    2. Union B   6. Union F
    3. Management   7. Union G
    4. Union D   8. Other

Appendix A Notes:

1. The original survey was three pages long, with print on both sides. It appears longer because it had to be re-formatted to fit into this document.

2. Each survey pack was accompanied by a self-addressed stamped envelope and a self-addressed stamped post card that contained an ID code that was used to track response rates.

<u>Example of Post Card</u>

```
+-------------------------------------------------+
|                                      +--------+ |
|                                      | Stamp  | |
|                                      |        | |
|                                      +--------+ |
|                                                 |
|      Christopher A. Bowling - IDCODE            |
|      Street Address                             |
|      City, State ZIP                            |
|                                                 |
+-------------------------------------------------+
```
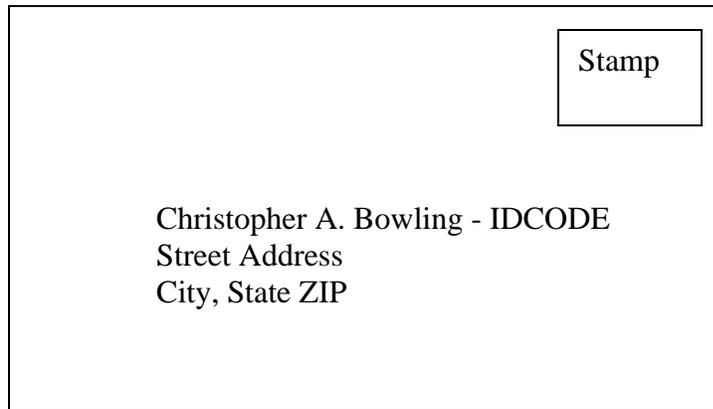
APPENDIX B – MANAGER SURVEY PACK

October 11, 2002

Dear Agency Employee:

Greetings! My name is Christopher Bowling and I am working on my doctoral dissertation in Public Administration at the Pennsylvania State University. Part of my research project is on employee involvement in work situations.   I have received permission from the Agency Executive, Agency union leaders, and your university to collect data on how employees feel about various work related issues. I would like to please ask for your help in completing my project. Of course your participation is completely voluntary, but I would greatly appreciate the favor of a response.

Your name was randomly selected to receive the enclosed survey. May I ask that you please read the enclosed instructions and fill out the survey? It will take approximately 20 minutes to complete. When finished, could you please return the survey in the postage-paid envelope provided **and** then separately mail the enclosed pre-stamped postcard by **October 25, 2002**?   The postcard is only for tracking response rates, not so I can match names to survey responses. Please be assured that **NO ONE**, including me, will ever be able to match your survey responses to your name. All survey data will be anonymous. Only aggregated responses will be reported to interested parties.

Pennsylvania State University research policy also requires me to provide you with additional information on this project. This is contained on the enclosed Informed Consent letter. This form is for your records. Please read this form and feel free to contact me if you have any questions about this project.

If you would be interested in the results of my study, a copy of the final report will be available at http://hometown.aol.com/cabowl/myhomepage/business.html. The report will be available in the second quarter of 2003.

I want to thank you in advance for your valuable assistance on this research project. I appreciate your help in completing my degree, which I could not do without your help!

Sincerely,

Christopher A. Bowling

Most of the questions in this survey ask that you circle one of several numbers that appear under or to the right of the item. You are to choose the one number that best matches the description of how you feel about the item.

For example, if you were asked how much you agree with the statement "I enjoy the weather here," and feel that you agree, circle the number under Agree like this:

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree
I enjoy the weather here ……………..	1	2	3	4	(5)	6	7

Note that the response choices may be different in different parts of the questionnaire. For example, they may ask not whether you agree or disagree, but perhaps whether you are satisfied or dissatisfied, or whether you think something is useful or not, etc.

So please be sure to read the special instructions that appear on each page and to read the response choices before choosing your answers. This is NOT a test. There are no right answers, just your candid opinion.

If the content of the question is not at all relevant to you or your job, please write N/A as your response. Do this only if absolutely necessary, as N/A on an item may cause some of your other choices to be excluded from analyses.

Attached to these instructions is a glossary of terms that will assist you in understanding the terms used in survey sections H and I. Items that appear in the glossary are indicated by an asterisk. (*)

When you have finished, please place the questionnaire in the postage paid return envelope provided and return your completed survey to the address indicated. Also please return the pre-stamped post card, which is used only to track response rates, not to match names to survey data. ***Please return the survey and post card by October 25, 2002.***

Please be assured that **NO ONE**, including me, will ever be able to match your name to your responses.

Thank you for your assistance.

Please see the reverse side for the Informed Consent Statement

INFORMED CONSENT FORM FOR
BEHAVIORAL AND SOCIAL SCIENCE RESEARCH
The Pennsylvania State University

Title of Project: Involvement Management and Effectiveness in Higher Education

Principal Investigator: Christopher A. Bowling,
                Telephone; (XXX) XXX-XXXX email: xxxxxxxxx

Advisor: Dr. Rupert Chisholm,
       School of Public Affairs, Department of Public Administration
       The Pennsylvania State University – Harrisburg
       777 W. Harrisburg Pike, Middletown, PA 17057
       (717) 948-6050

1. Purpose of this study: To see if effective organizations have a greater number of committed employees.

2. Procedures to be followed: You will be asked to complete 97 questions on a survey.

3. Discomforts and Risks: None beyond those experienced in everyday life.

4. Benefits: Society will benefit from this research project through improved organizational management knowledge.

5. Duration: It will take 20 to 30 minutes to complete the questions.

6. Statement of Confidentiality: No one, including the principal investigator, will be able to identify your responses on the survey. You will be asked to return two things: the completed survey and a prepaid postcard. The survey will have no identifying markings on it. The postcard will have a code on it and will only be used by the principal investigator to track response rates. Please mail the survey and the postcard separately. The principal investigator will not be able to match your name to the survey you filled out and sent in.

7. Right to Ask Questions: You can ask any questions about the research. If you have questions, please contact Christopher A. Bowling at (XXX) XXX-XXXX (email: XXXXX@XXX.com)

8. Voluntary Participation: You do not have to participate in this research project. You do not have to answer any questions you do not want to answer. The completion and return of the survey indicates that you have given the principal investigator your consent to be included in this research project.

9. Age: You must be 18 years of age or older to participate in this research study.

Glossary of Terms (for Survey Sections H & I)

Section H; Pay/Reward Systems

1. **All salaried pay systems** – a system in which all employees are salaried, thus eliminating the distinction between hourly and salaried employees.

2. **Knowledge/skill-based pay** – an alternative to traditional job-based pay that sets pay levels based on how many skills employees have or how many jobs they can potentially do, not on the job they are currently holding. Also called pay for skills, pay for knowledge, and competency-based pay.

3. **Gainsharing** – plans based on a formula that shares some portion of gains in productivity, quality, cost effectiveness, or other performance indicators. The gains are shared in the form of bonuses with all employees in an organization (such as a department.) It typically includes a system of employee suggestion committees. The basis of the formula is some set of local performance measures. Examples include the Scanlon Plan, the Improshare Plan, the Rucker Plan and various custom-designed plans.

4. **Individual Incentives** – bonuses or other financial compensation tied to short term or long term individual performance.

5. **Work-group or team incentives** – bonuses or other financial compensation tied to short term or long term work-group, permanent team, or temporary team performance.

6. **Nonmonetary recognition awards for performance** – any nonmonetary reward (including gifts, publicity, dinners, etc.) for individual or group performance.

7. **Flexible, cafeteria-style benefits** – a plan that gives employees choices in the types and amounts of various fringe benefits they receive.

8. **Employment security** – university policy designed to prevent lay offs.

9. **Open pay information** – a communication program that gives employees information about pay policies, ranges, increase amounts, bonus amounts, and job or skill evaluation systems. May or may not include information about what specific individuals are paid. (The fact that individual pay amounts are a matter of public record does not qualify under the above criteria, which is concerned with a more proactive approach in disseminating the above information to employees.)

Section I; Employee Involvement Innovations or Programs

1. **Suggestion system** – a program that elicits individual employee suggestions on improving work or the work environment.

2. **Survey feedback** – use of employee attitude survey results, not simply as an opinion poll but rather as part of a larger problem-solving process in which survey data are used to encourage, structure, and measure the effectiveness of employee participation.

3. **Job enrichment or design** – design of work that is intended to increase worker performance and job satisfaction by increasing skill variety, autonomy, significance and identity of the task, and performance feedback.

4. **Quality circles** – structured employee participation groups in which groups of volunteers from a particular work area meet regularly to identify and suggest improvements to work-related problems. The goals of quality circles are improved quality and productivity. There are no direct rewards for circle activity; group problem-solving training is provided; and the groups' only power is to suggest changes to management.

5. **Employee participation groups other than quality circles** – any employee participation groups such as task teams or employee work councils, that do not fall within the definitions of either self-managing work teams or quality circles.

6. **Union-management quality of work life (QWL)** – joint union-management committees, usually existing at multiple organizational levels, alongside the established union and management relationships and collective bargaining committees. QWL committees usually are prohibited from directly addressing contractual issues such as pay and are charged with developing changes that improve both organizational performance and employee quality of work life.

7. **Minibusiness units** – relatively small, self-contained organizational units that produce their own product or service and operate in a decentralized, partly autonomous fashion as a small business.

8. **Self-managing work teams** – also termed autonomous work groups, semiautonomous work groups, self-regulating work teams, or simply work teams. The work group (in some cases, acting without a supervisor) is responsible for a whole product or service and makes decisions about tasks assignments and work methods. The team may be responsible for its own support services (such as maintenance, purchasing, and quality control) and may perform certain personnel functions (such as hiring and firing team members and determining pay increases.)

9. **Employee committees concerned with policy and/or strategy** – any group or committee that includes nonmanagement employees, created to comment on, offer advice on, or determine major university policies and/or strategies.

SECTION A   OUTCOMES

How much do you agree or disagree with each of the following statements?

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree
1. All in all, I am satisfied with my job ………….	1	2	3	4	5	6	7
2. I am willing to put in a great deal of effort beyond what is normally expected in order to help this organization be successful …………...………….	1	2	3	4	5	6	7
3. I feel I can trust the people in this organization ...	1	2	3	4	5	6	7
4. I am familiar with all aspects of work done in my work group …………...…………...………….	1	2	3	4	5	6	7
5. I talk up this organization to my friends as a great organization to work for …………..………….	1	2	3	4	5	6	7
6. I will probably look for a new job in the next year..	1	2	3	4	5	6	7
7. In general, I don't like my job …………………...	1	2	3	4	5	6	7
8. People here feel you can't trust this organization ..	1	2	3	4	5	6	7
9. I find that my values and the organization's values are very similar …………………………………...	1	2	3	4	5	6	7
10. I know how the work of my group fits with the work of other groups ………………………….	1	2	3	4	5	6	7
11. In general, I like working here …………………..	1	2	3	4	5	6	7
12. This organization will take advantage of you if you give it a chance ………………………………...	1	2	3	4	5	6	7
13. There is not too much to be gained by sticking with this organization indefinitely ………………	1	2	3	4	5	6	7
14. When the management of this organization says something, you can really believe it is true ……...	1	2	3	4	5	6	7
15. This organization really inspires the very best in me in the way of job performance ………………	1	2	3	4	5	6	7

How well informed are you about the following?

	Not at all Informed	Slightly Informed	Somewhat Informed	Informed	Very Well Informed
1. The Agency's goals ……………………………	1	2	3	4	5
2. The Agency's operating results ……………..	1	2	3	4	5
3. Your university's goals ……………………...	1	2	3	4	5
4. You university's operating results …………...	1	2	3	4	5
5. Your department's goal …………………………	1	2	3	4	5
6. Your department's performance ……………...	1	2	3	4	5
7. New technologies that may affect you ………...	1	2	3	4	5
8. Business plans that may affect you …………….	1	2	3	4	5
9. Jobs and career opportunities ………………….	1	2	3	4	5
10. Competitor universities' relative performance ..	1	2	3	4	5

How much do you agree or disagree with each of the following statements about promotional opportunities?

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree
1. My promotional opportunities depend almost entirely on how well I perform my job ………...	1	2	3	4	5	6	7
2. My promotional opportunities depend on the success of my university ………………………	1	2	3	4	5	6	7
3. My promotional opportunities are fair given the promotional opportunities my co-workers have..	1	2	3	4	5	6	7
4. I am very happy with my promotional opportunities .………………………………	1	2	3	4	5	6	7

	Strongly Disagree	Disagree	Slightly Disagree	Neither	Slightly Agree	Agree	Strongly Agree

5. My promotional opportunities are determined by
   the success of my university ……………………... 1 2 3 4 5 6 7

6. My promotional opportunities are fair compared to
   the promotional opportunities of others in my
   university ………………………………………. 1 2 3 4 5 6 7

7. Considering my skills and effort, I am very
   satisfied with my promotional opportunities …… 1 2 3 4 5 6 7

8. Promotional opportunities around here depend on
   how well you perform …………………………... 1 2 3 4 5 6 7

9. Promotional opportunities are tied to university
   performance …………………………………... 1 2 3 4 5 6 7

10. My promotional opportunities are fair considering
    the opportunities that other people have at this
    university ………………………………….. 1 2 3 4 5 6 7

11. My promotional opportunities are determined by
    my individual job performance ………………… 1 2 3 4 5 6 7

12. My promotional opportunities are determined by
    my department's job performance ……………… 1 2 3 4 5 6 7

How much do you expect each of the following to be in determining your promotional
opportunities over the next twelve months?

	Not at All		To Some Extent		To a Large Extent		To a Great Extent

13. Your individual job performance ……………... 1 2 3 4 5 6 7

14. Your department's performance ……………... 1 2 3 4 5 6 7

15. The performance of your university …….….… 1 2 3 4 5 6 7

16. The performance of the Agency ……………… 1 2 3 4 5 6 7

| How much influence do you have over decisions about each of the following? |

	No Influence At All	Very Little Influence	Some Influence	Quite A Bit of Influence	A Great Deal of Influence
1. The way your work is done ………………………	1	2	3	4	5
2. Ways of improving productivity ………………	1	2	3	4	5
3. Quality of your work environment ……………	1	2	3	4	5
4. Quality of your work …………………………..	1	2	3	4	5
5. Planning and scheduling of your own work …..	1	2	3	4	5
6. Your department's costs ………………………	1	2	3	4	5
7. The time it takes your department to get things done …………………………………………...	1	2	3	4	5
8. The flexibility of your department's operations..	1	2	3	4	5
9. The level of coordination between your university's departments ……………………………………	1	2	3	4	5
10. The goals and performance standards of your job ……………………………………………	1	2	3	4	5

During the past three years, have you received formal training in the following areas? If yes, has your training in this area been adequate to meet your needs?

	Formal Training Received?			Has Training Been Adequate?	
	Yes	No	Don't Know	Yes	No
1. Group problem-solving and decision-making..	1	2	3	1	2
2. Leadership and management skills ………….	1	2	3	1	2
3. Skills in understanding business (e.g. accounting, finance) …………………...	1	2	3	1	2
4. Quality analysis or statistical control processes ……………………………………	1	2	3	1	2
5. Technical skills required to do your job ……...	1	2	3	1	2
6. Cross training in skills required to do other jobs	1	2	3	1	2

About how many employees in your department are routinely provided with the following types of information?

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	Almost All (81-99%)	All (100%)
1. Information about the Agency's overall operating results …………………………..	1	2	3	4	5	6	7
2. Information about the University's operating results …………………………..	1	2	3	4	5	6	7
3. Information about their department's operating results …………………………...	1	2	3	4	5	6	7
4. Advance information on new technologies that may affect them ……………………..	1	2	3	4	5	6	7
5. Information on the Agency's business plans/goals ………………………………..	1	2	3	4	5	6	7
6. Information on the University's business plans/goals ………………………………..	1	2	3	4	5	6	7

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	Almost All (81-99%)	All (100%)
7. Information on competitors' relative importance ……………………………..	1	2	3	4	5	6	7

SECTION G   TRAINING

About how many employees in your department have received within the past three years, systematic, formal training on the following types of skills?

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	Almost All (81-99%)	All (100%)
1. Group decision-making/problem solving skills ……………………………………	1	2	3	4	5	6	7
2. Leadership skills ………………………..	1	2	3	4	5	6	7
3. Skills in understanding the business accounting, finance etc) …………………	1	2	3	4	5	6	7
4. Quality/statistical analysis skills ………...	1	2	3	4	5	6	7
5. Team building skills ……………………..	1	2	3	4	5	6	7
6. Job skills training …………………………	1	2	3	4	5	6	7
7. Cross Training ……………………………	1	2	3	4	5	6	7

About how many employees in your department are covered by or are eligible for a pay/reward system with each of the following elements?

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	Almost All (81-99%)	All (100%)
1. All-salaried pay systems*………………	1	2	3	4	5	6	7
2. Knowledge/skill-based pay* ……………	1	2	3	4	5	6	7
3. Gainsharing* ……………………………	1	2	3	4	5	6	7
4. Individual Incentives* …………………..	1	2	3	4	5	6	7
5. Work group or team incentives* ………..	1	2	3	4	5	6	7
6. Non-monetary recognition awards for performance* …………………………...	1	2	3	4	5	6	7
7. Flexible, cafeteria-style benefits* ……….	1	2	3	4	5	6	7
8. Employment security* …………………..	1	2	3	4	5	6	7
9. Open pay information* …………………	1	2	3	4	5	6	7

* - See enclosed glossary for more detail

This section concerns types of organizational innovations or programs that some organizations have adopted in order to increase employee involvement in decisions affecting their work and work environment. You may want to consider if these innovations or programs exist and then calculate the number of employees involved. Please consult the glossary insert to make sure you understand the term.

About how many employees in your department are currently involved in each of the following innovations or programs?

	None (0%)	Almost None (1-20%)	Some (21-40%)	About Half (41-60%)	Most (61-80%)	Almost All (81-99%)	All (100%)
1. Suggestion systems* ………………………	1	2	3	4	5	6	7
2. Survey feedback* ……………………….	1	2	3	4	5	6	7
3. Job enrichment or redesign* …………….	1	2	3	4	5	6	7
4. Quality circles* …………………………	1	2	3	4	5	6	7
5. Employee participation groups other than quality circles* ………………………….	1	2	3	4	5	6	7
6. Union-management quality of work life (QWL) committees* ……………….…	1	2	3	4	5	6	7
7. Mini-business units* ………………..	1	2	3	4	5	6	7
8. Self-managing work teams* ……………...	1	2	3	4	5	6	7
9. Employee committees concerned with policy and/or strategy* ……………………	1	2	3	4	5	6	7

* - See enclosed glossary for more detail

In this section we ask a number of questions about your background. This information will allow comparisons among different groups of employees and comparisons with similar groups of employees in other organizations.

All of your responses are strictly confidential. Individual responses will not be seen by anyone at your university or the Agency. We appreciate your help in providing this important information.

1. Are you (please circle):

      1. Female   2. Male

2. a) How many years have you worked for your University? (Round off to nearest year; if less than 6 months, put "0")

      _____ years

    b) How many years have you worked in your current position?

      _____ years

3. **How old were you on your last birthday?**

    1. 29 and under   4. 50 to 59

    2. 30 to 39   5. 60 to 69

    3. 40 to 49   6. 70 and over

4. Are you (please circle):

    1. African-American

    2. Asian

    3. American Indian

    4. Hispanic

    5. White

    6. None of the Above

5. What university are you employed by?

    1. University A   3. University C

    2. University B   4. University D

6. What is your current level of education? (please circle)

    1. Elementary School

    2. Some High School

    3. Graduated High School or GED

    4. Some college or technical training past high school

    5. Graduated from college (bachelor's degree)

    6. Some graduate school

    7. Graduate Degree (Masters, PhD)

7. What category below does your job best fit in?

    1. Academic Instruction

    2. Academic Support

    3. Institutional Administration

    4. Information Technology

    5. Physical Plant/Maintenance

    6. Student Affairs/Services

    7. Research

    8. Public Service

8. Please indicate which of the following you are a member or fair share participant of (please circle):

    1. Union A   5. Union E
    2. Union B   6. Union F
    3. Management   7. Union G
    4. Union D   8. Other

Appendix B Notes:

1. The original survey was two pages long, with print on both sides. It appears longer because it had to be re-formatted to fit into this document.

2. Each survey pack was accompanied by a self-addressed stamped envelope and a self-addressed stamped post card that contained an ID code that was used to track response rates.

Example of Post Card

	Stamp

Christopher A. Bowling - IDCODE
Street Address
City, State ZIP
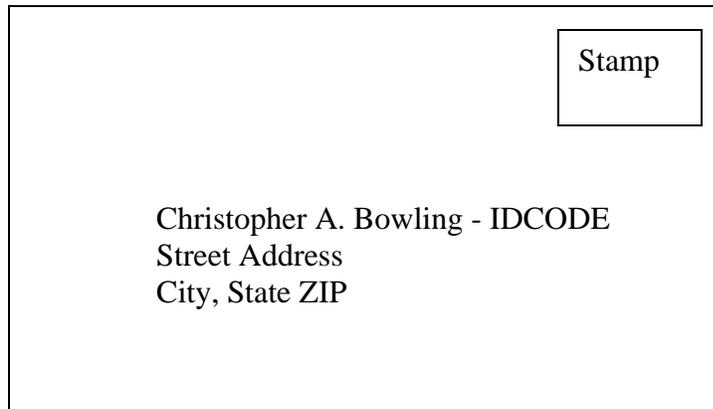
APPENDIX C – DEMOGRAPHICS AND DESCRIPTIVE STATISTICS

Appendix C – Table 1: Demographic Information for University A

	UNIVERSITY A							
	Support Staff		Faculty		Administrators		TOTALS	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Sex:								
Male	18	27%	24	43%	25	50%	67	39%
Female	49	73%	32	57%	25	50%	106	61%
Total	**67**	**100%**	**56**	**100%**	**50**	**100%**	**173**	**100%**
Age:								
Under 40	8	12%	15	27%	16	32%	39	23%
40 to 49	34	51%	17	31%	15	30%	66	38%
50 to 59	24	36%	21	38%	17	34%	62	36%
Over 60	1	1%	2	4%	2	4%	5	3%
Total	**67**	**100%**	**55**	**100%**	**50**	**100**	**172**	**100%**
Race:								
AfrAmer	-	-	3	5%	1	2%	4	2%
Asian	-	-	1	2%	-	-	1	1%
Caucasian	65	98%	49	88%	49	98%	163	94%
Hispanic	1	1%	-	-	-	-	1	1
Other	1	1%	3	5%	-	-	4	2%
Total	**67**	**100%**	**56**	**100%**	**50**	**100%**	**173**	**100%**
Education:								
HS Grad	21	31%	-	-	-	-	21	12%
Some College	38	57%	-	-	1	2%	39	23%
College Grad	4	6%	-	-	7	15%	11	6%
Some Grad School	3	5%	1	2%	4	9%	8	5%
Grad Degree	1	1%	55	98%	35	74%	91	54%
Total	**67**	**100%**	**56**	**100%**	**47**	**100%**	**170**	**100%**
Avg. No. of Years on Job:	16	N/A	12	N/A	11	N/A	13	N/A

Appendix C – Table 2: Demographic Information for University B

	UNIVERSITY B							
	Support Staff		Faculty		Administrators		TOTALS	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Sex:								
Male	23	38%	29	59%	28	56%	80	50%
Female	38	62%	20	41%	22	44%	80	50%
Total	**61**	**100%**	**49**	**100%**	**50**	**100%**	**160**	**100%**
Age:								
Under 40	7	11%	3	6%	10	20%	20	13%
40 to 49	17	28%	15	31%	18	37%	50	32%
50 to 59	33	54%	24	50%	19	39%	76	48%
Over 60	4	7%	6	13%	2	4%	12	7%
Total	**61**	**100%**	**48**	**100%**	**49**	**100%**	**158**	**100%**
Race:								
AfrAmer	3	5%	2	4%	4	8%	9	6%
Asian	-	-	2	4%	1	2%	3	2%
Caucasian	56	93%	42	86%	42	84%	140	88%
Hispanic	-	-	-	-	2	4%	2	1%
Other	1	2%	3	6%	1	2%	5	3%
Total	**60**	**100%**	**49**	**100%**	**50**	**100%**	**159**	**100%**
Education:								
HS Grad	14	23%	-	-	-	-	14	9%
Some College	31	51%	-	-	4	8%	35	22%
College Grad	10	16%	-	-	12	24%	22	14%
Some Grad School	3	5%	-	-	9	18%	12	7%
Grad Degree	3	5%	49	100%	25	50%	77	48%
Total	**61**	**100%**	**49**	**100%**	**50**	**100%**	**160**	**100%**
Avg. No. of Years on Job:	14	N/A	14	N/A	12	N/A	13	N/A

Appendix C – Table 3: Demographic Information for University C

	UNIVERSITY C							
	Support Staff		Faculty		Administrators		TOTALS	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Sex:								
Male	20	30%	29	55%	38	57%	87	47%
Female	46	70%	24	45%	29	43%	99	53%
Total	**66**	**100%**	**53**	**100%**	**67**	**100%**	**186**	**100%**
Age:								
Under 40	10	15%	10	19%	16	24%	36	19%
40 to 49	30	46%	15	29%	21	31%	66	36%
50 to 59	20	31%	22	42%	28	42%	70	38%
Over 60	5	8%	5	10%	2	3%	12	7%
Total	**65**	**100%**	**52**	**100%**	**67**	**100%**	**184**	**100%**
Race:								
AfrAmer	3	5%	2	4%	2	3%	7	4%
Asian	-	-	2	4%	1	1%	3	2%
Caucasian	57	86%	46	86%	63	95%	166	89%
Hispanic	4	6%	2	4%	-	-	6	3%
Other	2	3%	1	2%	1	1%	4	2%
Total	**66**	**100%**	**53**	**100%**	**67**	**100**	**186**	**100%**
Education:								
HS Grad	27	41%	-	-	-	-	27	14%
Some College	25	38%	-	-	4	6%	29	15%
College Grad	13	20%	1	2%	26	39%	40	22%
Some Grad School	-	-	1	2%	2	3%	3	2%
Grad Degree	1	1%	51	96%	35	52%	87	47%
Total	**66**	**100%**	**53**	**100%**	**67**	**100%**	**186**	**100%**
Avg. No. of Years on Job:	13	N/A	14	N/A	11	N/A	13	N/A

Appendix C – Table 4: Demographic Information for University D

	Support Staff		Faculty		Administrators		TOTALS	
UNIVERSITY D								
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Sex:								
Male	27	33%	39	63%	36	53%	102	48%
Female	55	67%	23	37%	32	47%	110	52%
Total	**82**	**100%**	**62**	**100%**	**68**	**100%**	**212**	**100%**
Age:								
Under 40	13	16%	11	18%	18	27%	42	20%
40 to 49	28	34%	16	26%	24	36%	68	32%
50 to 59	37	45%	26	42%	21	31%	84	40%
Over 60	4	5%	9	14%	4	6%	17	8%
Total	**82**	**100%**	**62**	**100%**	**67**	**100%**	**211**	**100%**
Race:								
AfrAmer	2	2%	2	3%	1	1%	5	3%
Asian	-	-	3	5%	-	-	3	1%
Caucasian	80	98%	56	90%	66	98%	202	95%
Hispanic	-	-	-	-	-	-	-	-
Other	-	-	1	2%	1	1%	2	1%
Total	**82**	**100%**	**62**	**100%**	**68**	**100%**	**212**	**100%**
Education:								
HS Grad	24	29%	-	-	-	-	24	11%
Some College	45	55%	-	-	7	11%	52	25%
College Grad	5	6%	1	2%	15	22%	21	10%
Some Grad School	4	5%	1	2%	6	9%	11	5%
Grad Degree	4	5%	60	96%	39	58%	103	49%
Total	**82**	**100%**	**62**	**100%**	**67**	**100%**	**211**	**100%**
Avg. No. of Years on Job:	15	N/A	13	N/A	12	N/A	14	N/A

Appendix C – Table 5a: Descriptive Statistics – Perceptual and Practice Variables - Agency Wide

Variable	Scale	Agency Perceptions			Scale	Agency Practices		
		N	Mean	Std Dev		N	Mean	Std Dev
Power	1-5	720	3.37	.76	1-7	217	2.08	1.05
Rewards	1-7	695	3.39	1.42	1-7	205	2.25	.96
Information	1-5	711	3.15	.80	1-7	225	3.60	1.37
Knowledge	-1to3	738	1.38	.48	1-7	223	2.57	1.12
Organizational Commitment	1-7	709	5.05	1.00	N/A	N/A	N/A	N/A

Appendix C – Table 5b: Descriptive Statistics by Employee Groups – Agency Wide

Perceptual Variable	Scale	Sample Level - Support Staff			Sample Level - Faculty			Sample Level - Administrators		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	269	3.11	.79	216	3.34	.64	235	3.69	.70
Rewards	1-7	267	2.75	1.24	200	3.88	1.36	228	3.69	1.41
Information	1-5	267	2.80	.80	213	3.36	.64	231	3.37	.80
Knowledge	-1to3	277	1.28	.45	223	1.31	.49	238	1.56	.47
Organizational Commitment	1-7	269	4.82	.95	211	5.09	1.04	229	5.27	.95

Appendix C – Table 6a: Descriptive Statistics - Perceptual and Practice Variables – University A

Variables	University A Perceptions				University A Practices			
	Scale	N	Mean	Std Dev	Scale	N	Mean	Std Dev
Power	1-5	168	3.27	.77	1-7	45	2.37	1.27
Rewards	1-7	164	3.32	1.43	1-7	45	2.10	.83
Information	1-5	169	3.11	.75	1-7	51	3.68	1.29
Knowledge	-1to3	174	1.45	.52	1-7	47	2.68	1.18
Organizational Commitment	1-7	163	4.92	1.11	N/A	N/A	N/A	N/A

Appendix C –Table 6b: Descriptive Statistics by Employee Grouping – University A

Perceptual Variable	Scale	University A Support Staff			University A Faculty			University A Administrators		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	67	3.09	.73	52	3.14	.71	49	3.66	.75
Rewards	1-7	65	2.66	1.16	49	3.55	1.34	50	3.95	1.50
Information	1-5	65	2.92	.75	55	3.14	.66	49	3.33	.81
Knowledge	-1to3	67	1.36	.46	56	1.40	.59	51	1.61	.51
Organizational Commitment	1-7	64	4.85	1.00	53	4.76	1.24	46	5.21	1.05

Appendix C – Table 7a: Descriptive Statistics – Perceptual and Practice Variables – University B

Variable	Scale	N	Mean	Std Dev	Scale	N	Mean	Std Dev
		University B Perceptions				University B Practices		
Power	1-5	157	3.37	.74	1-7	47	1.87	.89
Rewards	1-7	150	3.34	1.49	1-7	43	2.23	.91
Information	1-5	154	3.13	.74	1-7	47	3.54	1.30
Knowledge	-1to3	161	1.33	.43	1-7	47	2.50	1.21
Organizational Commitment	1-7	156	4.95	.84	N/A	N/A	N/A	N/A

Appendix C – Table 7b: Descriptive Statistics by Employee Grouping – University B

Perceptual Variable	Scale	University B Support Staff			University B Faculty			University B Administrators		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	58	3.22	.87	48	3.43	.57	51	3.49	.69
Rewards	1-7	58	2.88	1.40	43	4.17	1.39	49	3.13	1.38
Information	1-5	59	2.80	.74	47	3.44	.64	48	3.22	.69
Knowledge	-1to3	61	1.25	.41	49	1.22	.31	51	1.53	.50
Organizational Commitment	1-7	60	4.97	.75	46	5.06	.84	50	4.84	.94

Appendix C – Table 8a: Descriptive Statistics – Perceptual and Practice Variables – University C

| Variable | University C Perceptions | | | | University C Practices | | | |
	Scale	N	Mean	Std Dev	Scale	N	Mean	Std Dev
Power	1-5	188	3.47	.77	1-7	65	2.01	.90
Rewards	1-7	180	3.34	1.40	1-7	59	2.12	.84
Information	1-5	187	3.19	.87	1-7	62	3.48	1.26
Knowledge	-1to3	191	1.35	.49	1-7	64	2.48	.94
Organizational Commitment	1-7	183	5.07	1.03	N/A	N/A	N/A	N/A

Appendix C – Table 8b: Descriptive Statistics by Employee Groups – University C

| Perceptual Variable | | University C Support Staff | | | University C Faculty | | | University C Administrators | | |
	Scale	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	66	3.03	.80	54	3.33	.71	68	3.72	.62
Rewards	1-7	65	2.75	1.16	52	3.90	1.50	63	3.49	1.34
Information	1-5	66	2.69	.85	54	3.56	.66	67	3.39	.83
Knowledge	-1to3	67	1.18	.41	56	1.27	.53	68	1.58	.44
Organizational Commitment	1-7	65	4.78	1.02	52	5.15	1.08	66	5.28	.93

Appendix C – Table 9a: Descriptive Statistics – Perceptual and Practice Variables – University D

Variable	Scale	University D Perceptions			Scale	University D Practices		
		N	Mean	Std Dev		N	Mean	Std Dev
Power	1-5	207	3.44	.76	1-7	60	2.12	1.10
Rewards	1-7	201	3.52	1.39	1-7	58	2.51	1.16
Information	1-5	201	3.17	.83	1-7	65	3.71	1.57
Knowledge	-1to3	212	1.39	.48	1-7	65	2.64	1.18
Organizational Commitment	1-7	207	5.20	.97	N/A	N/A	N/A	N/A

Appendix C – Table 9b: Descriptive Statistics by Employee Groups – University D

Perceptual Variable	Scale	University D Support Staff			University D Faculty			University D Administrators		
		N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev
Power	1-5	78	3.10	.78	63	3.44	.55	66	3.83	.73
Rewards	1-7	79	2.74	1.24	57	3.92	1.16	65	4.12	1.29
Information	1-5	77	2.78	.84	58	3.30	.58	66	3.51	.82
Knowledge	-1to3	82	1.33	.49	63	1.32	.47	67	1.54	.45
Organizational Commitment	1-7	80	4.71	.99	61	5.37	.85	66	5.65	.76

APPENDIX D – ALPHA VALUES BY SURVEY SECTION

Survey Section A: Organizational Commitment Standardized Item Alpha: .9019 (N = 709)	Alpha if Item Deleted	Difference in Alpha
Q1. Overall satisfied with job	.8918	-0.0101
Q2. Willing to put in extra effort	.8990	-0.0029
Q3. Trusts the organization	.8897	-0.0122
Q4. Familiar with all aspects of work group	.9055	0.0036
Q5. Talk up organization as a great place to work	.8892	-0.0127
Q6. Probably will look for a new job	.9013	-0.0006
Q7. Don't like job	.8932	-0.0087
Q8. Can't trust organization	.8964	-0.0055
Q9. Values similar to organization's values	.8891	-0.0128
Q10. Knows how work group fits with other groups	.9004	-0.0015
Q11. Likes working for organization	.8909	-0.0110
Q12. Organization takes advantage of you	.8949	-0.0070
Q13. No gain from sticking with organization	.8942	-0.0077
Q14. Believes what management says is true	.8933	-0.0086
Q15. Organization inspires the best job performance	.8877	-0.0142

Survey Section B: Information Sharing Standardized Item Alpha: .9004 (N = 711)	Alpha if Item Deleted	Difference in Alpha
Q1. Informed on Agency's goals	.8878	-0.0126
Q2. Informed on Agency's operating results	.8900	-0.0104
Q3. Informed on university's goals	.8830	-0.0174
Q4. Informed on university's operating results	.8834	-0.0170
Q5. Informed on department's goals	.8884	-0.0120
Q6. Informed on department's operating results	.8872	-0.0132
Q7. Informed about new technologies affecting job	.8924	-0.0080
Q8. Informed on business plans	.8873	-0.0131
Q9. Informed on job and career opportunities	.8989	-0.0015
Q10. Informed on competitor's relative performance	.8929	-0.0075

Survey Section C: Rewards Standardized Item Alpha: .9541 (N = 695)	Alpha if Item Deleted	Difference in Alpha
Q1. Promotion opportunities depend on job performance	.9496	-0.0045
Q2. Promotion opportunities depend on university performance	.9514	-0.0027
Q3. Promotional opportunities fair relative to co-workers	.9514	-0.0027
Q4. Happy with promotional opportunities	.9495	-0.0046
Q5. Promotion opportunities determined by success of university	.9514	-0.0027
Q6. Promotional opportunities fair relative to opportunities for others in the university	.9516	-0.0025
Q7. Satisfied with promotional opportunities given skills and effort	.9500	-0.0041
Q8. Promotional opportunities depend on how well you perform	.9492	-0.0049
Q9. Promotional opportunities are tied to university performance	.9510	-0.0031
Q10. Promotional opportunities are fair considering opportunities others in university have	.9508	-0.0033
Q11. Promotional opportunities determined by individual job performance	.9490	-0.0051
Q12. Promotional opportunities determined by department's job performance	.9504	-0.0037
Q13. In next 12 months, promotional opportunities determined by individual job performance	.9528	-0.0013
Q14. In next 12 months, promotional opportunities determined by department's job performance	.9526	-0.0015
Q15. In next 12 months, promotional opportunities determined by university's performance	.9528	-0.0013
Q16. In next 12 months, promotional opportunities determined by Agency's performance	.9545	0.0004

Survey Section D: Power Standardized Item Alpha: .8941 (N = 720)	Alpha if Item Deleted	Difference in Alpha
Q1. Influence over way work is done	.8849	-0.009
Q2. Influence over improving productivity	.8801	-0.014
Q3. Influence over quality of work environment	.8838	-0.010
Q4. Influence over quality of work	.8923	-0.002
Q5. Influence over planning and scheduling work	.8882	-0.006
Q6. Influence over department's costs	.8847	-0.009
Q7. Influence over the time it takes your department to get things done	.8807	-0.013
Q8. Influence over flexibility of department's operations	.8768	-0.017
Q9. Influence over coordination with other departments	.8874	-0.007
Q10 Influence over goals and performance standards of your job	.8815	-0.013

Survey Section E: Knowledge Standardized Item Alpha: .6527 (N = 666)	Alpha if Item Deleted	Difference in Alpha
Q1. Employees received training on group-problem solving and decision-making	.5516	-0.1011
Q2. Employees received training on leadership and management skills	.5667	-0.0860
Q3. Employees received training on understanding business	.6192	-0.0335
Q4. Employees received training on quality analysis or statistical control processes	.6130	-0.0397
Q5. Employees received training on technical skills required for job	.6161	-0.0366
Q6. Employees received cross training in skills required to do other jobs	.6298	-0.0229

Survey Section F: Information Sharing Practices Standardized Item Alpha: .9061 (N = 225)	Alpha if Item Deleted	Difference in Alpha
Q1. Employees informed on agency's overall operating results	.8862	-0.0199
Q2. Employees informed on university's operating results	.8775	-0.0286
Q3. Employees informed on department's operating results	.8974	-0.0087
Q4. Employees informed on new technologies that affect them	.9085	0.0024
Q5. Employees informed on agency's business Plan/goals	.8847	-0.0214
Q6. Employees informed on university's business Plan/goals	.8843	-0.0218
Q7. Employees informed on competitor's relative Performance	.8984	-0.0077

Survey Section G: Knowledge Practices Standardized Item Alpha: .8643 (N = 223)	Alpha if Item Deleted	Difference in Alpha
Q1. Employees received training on group-decision making/problem solving skills	.8270	-0.0373
Q2. Employees received training on leadership skills	.8224	-0.0419
Q3. Employees received training in business skills	.8459	-0.0184
Q4. Employees received training in quality and/or statistical analysis	.8436	-0.0207
Q5. Employees received training in team building	.8189	-0.0454
Q6. Employees received job skills training	.8529	-0.0114
Q7. Employees received cross training	.8510	-0.0133

Survey Section H: Reward Practices Standardized Item Alpha: .6946 (N = 205)	Alpha if Item Deleted	Difference in Alpha
Q1. Employees covered by all salaried pay systems	.6615	-0.0331
Q2. Employees covered by knowledge/skill-based Pay	.6514	-0.0432
Q3. Employees covered by gainsharing	.6528	-0.0418
Q4. Employees covered by individual incentives	.6336	-0.0610
Q5. Employees covered by work group/team incentives	.6375	-0.0571
Q6. Employees eligible for non-monetary recognition awards for performance	.6023	-0.0923
Q7. Employees covered by flexible, cafeteria-style benefits	.6382	-0.0564
Q8. Employees covered by employment security	.6014	-0.0932
Q9. Employees covered by open-pay information	.6081	-0.0865

Survey Section I: Power Practices Standardized Item Alpha: .8150 (N = 217)	Alpha if Item Deleted	Difference in Alpha
Q1. Employees involved in Suggestion Systems	.8040	-0.0110
Q2. Employees involved in Survey Feedback	.7894	-0.0256
Q3. Employees involved in job enrichment or re-design	.7732	-0.0418
Q4. Employees involved in Quality Circles	.7772	-0.0378
Q5. Employees involved in participative groups other than Quality Circles	.7724	-0.0426
Q6. Employees involved in union-management quality of work life committees	.7988	-0.0162
Q7. Employees involved in mini-business units	.7985	-0.0165
Q8. Employees involved in self-managing work teams	.8040	-0.0110
Q9. Employees involved in committees concerned with policy/strategy.	.7820	-0.0330

APPENDIX E – FACTOR ANALYSIS RESULTS

Appendix E - Factor Analysis Rotated Component Matrix and Communalities

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
Survey Section A - Organizational Commitment						
A1. Overall satisfied with job		.74				.63
A2. Willing to put in extra effort		.48				.31
A3. Trusts the organization	.30	.63				.56
A4. Familiar with all aspects of work group			.30			.16
A5. Talk up organization as a great place to work		.74				.65
A6. Probably will look for a new job		.47				.33
A7. Don't like job		.68		.29		.57
A8. Can't trust organization		.51				.36
A9. Values similar to organization's values		.68				.60
A10. Knows how work group fits with other groups		.33	.30			.26
A11. Likes working for organization		.79				.70
A12. Organization takes advantage of you	.28	.53				.40
A13. No gain from sticking with organization		.62				.48
A14. Believes what management says is true	.32	.49				.47

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
A15. Organization inspires the best job performance	.32	.69				.66
Survey Section B – Information Sharing						
B1. Informed on Agency's goals			.74			.60
B2. Informed on Agency's operating results			.72			.60
B3. Informed on university's goals			.74			.67
B4. Informed on university's operating results			.76			.67
B5. Informed on department's goals			.62	.35		.58
B6. Informed on department's operating results			.64	.34		.59
B7. Informed about new technologies affecting job			.63			.46
B8. Informed on business plans			.67			.56
B9. Informed on job and career opportunities			.56			.37
B10. Informed on competitor's relative performance			.65			.48
Survey Section C – Rewards						
C1. Promotion opportunities depend on job performance	.825					.73

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
C2. Promotion opportunities depend on university performance	.720				.342	.67
C3. Promotional opportunities fair relative to co-workers	.736					.69
C4. Happy with promotional opportunities	.822					.79
C5. Promotion opportunities determined by success of university	.724				.290	.64
C6. Promotional opportunities fair relative to opportunities for others in the university	.730					.66
C7. Satisfied with promotional opportunities given skills and effort	.803					.77
C8. Promotional opportunities depend on how well you perform	.832					.77
C9. Promotional opportunities are tied to university performance	.736				.273	.66
C10. Promotional opportunities are fair considering opportunities others in university have	.766					.74
C11. Promotional opportunities determined by individual job performance	.839					.77

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
C12. Promotional opportunities determined by department's job performance	.756				.277	.67
C13. In next 12 months, promotional opportunities determined by individual job performance	.604				.281	.51
C14. In next 12 months, promotional opportunities determined by department's job performance	.525				.550	.65
C15. In next 12 months, promotional opportunities determined by university's performance	.519	.255			.603	.73
C16. In next 12 months, promotional opportunities determined by Agency's performance	.434				.532	.57
Survey Section D – Power						
D1. Influence over way work is done				.718		.59
D2. Influence over improving productivity		.261		.680		.59
D3. Influence over quality of work environment		.363		.544		.51

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
D4. Influence over quality of work				.656		.46
D5. Influence over planning and scheduling work				.686		.51
D6. Influence over department's costs			.277	.507	.377	.50
D7. Influence over the time it takes your department to get things done				.583	.329	.54
D8. Influence over flexibility of department's operations			.253	.621	.369	.62
D9. Influence over coordination with other departments			.313	.369	.399	.45
D10. Influence over goals and performance standards of your job		.284		.597	.258	.56
Survey Section E – Knowledge						
E1. Employees received training on group problem solving and decision-making					.464	.23
E2. Employees received training on leadership and management skills					.478	.27
E3. Employees received training on understanding business					.279	< .01

	Factor 1 Rewards	Factor 2 Commitment	Factor 3 Information	Factor 4 Power	Factor 5 Knowledge	Communalities
E4. Employees received training on quality analysis or statistical control processes					.291	< .01
E5. Employees received training on technical skills required for job					.261	.11
E6. Employees received cross training in skills required to do other jobs					.294	.11

Note: Components < .25 are not shown in the above table

Appendix E – Eigenvalues Produced in the Factor Analysis

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	17.1	29.9	29.9
2	4.9	8.6	38.5
3	3.2	5.6	44.1
4	2.6	4.5	48.6
5	2.2	3.9	52.5
6	1.9	3.3	55.9
7	1.5	2.6	58.5
8	1.3	2.4	60.8
9	1.1	2.0	62.8
10	1.1	2.0	64.8
11	1.0	1.8	66.6
12	1.0	1.8	68.4
13	1.0	1.7	70.2

APPENDIX F – REGRESSION RESULTS BY UNIVERSITY

University A Regression Results: Dependent Variable = Organizational Commitment

University A – All Employees (N = 148)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Power	0.52	0.52	0.27	0.52	<0.01
Rewards	0.41	0.66	0.44	0.42	<0.01
Information	0.26	0.71	0.51	0.27	<0.01
Knowledge	0.20	0.74	0.55	0.21	<0.01

University A – Support Staff (N = 61)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Rewards	0.34	0.65	0.43	0.48	<0.01
Power	0.29	0.50	0.25	0.48	<0.01
Information	0.38	0.38	0.15	0.38	<0.01
Knowledge	0.15	0.69	0.48	0.24	.02

University A – Faculty (N = 44)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Power	0.67	0.67	0.44	0.59	<0.01
Rewards	0.49	0.77	0.59	0.49	0.01
Information	0.30	0.81	0.66	0.28	<0.01
Knowledge	-0.08	0.84	0.70	0.22	.02

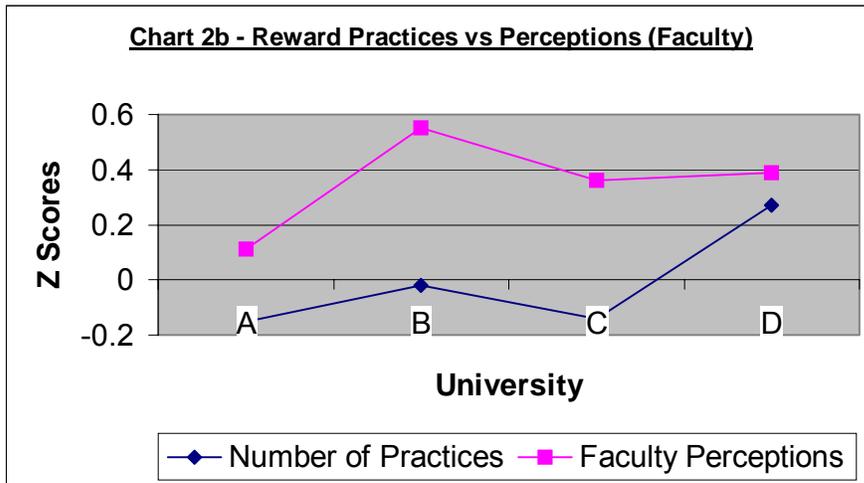| University A – Administrators (N = 43)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Power	0.62	0.62	0.39	0.59	<0.01
Knowledge	0.44	0.76	0.57	0.37	<0.01
Rewards	0.40	0.80	0.64	0.27	0.01
Information	0.02	-	-	-	-

University B Regression Results: Dependent Variable = Organizational Commitment

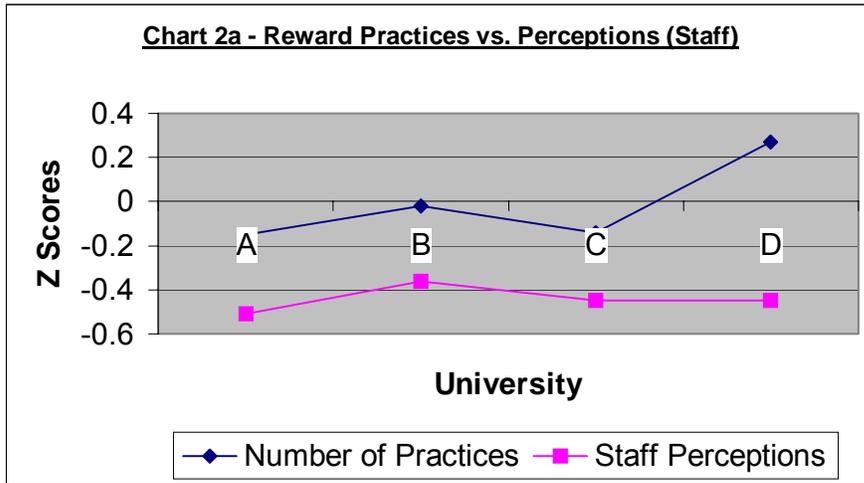| University B – All Employees (N = 142)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Rewards	0.44	0.44	0.19	0.44	<0.01
Info	0.38	0.58	0.34	0.38	<0.01
Power	0.23	0.62	0.39	0.23	<0.01
Knowledge	0.03	-	-	-	-

University B – Support Staff (N = 55)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Rewards	0.43	0.43	0.19	0.45	<0.01
Info	0.41	0.61	0.37	0.43	<0.01
Power	0.04	-	-	-	-
Knowledge	-0.22	-	-	-	-

University B – Faculty (N = 41)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Rewards	0.52	0.52	0.27	0.68	<0.01
Info	0.49	0.82	0.67	0.65	<0.01
Power	0.16	-	-	-	-
Knowledge	0.16	-	-	-	-

University B – Administrators (N = 46)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R^2 (cumulative)	Partial Beta (Final)	Significance
Power	0.53	0.53	0.28	0.51	<0.01
Rewards	0.38	0.65	0.42	0.36	<0.01
Info	0.32	0.71	0.50	0.29	0.01
Knowledge	0.25	-	-	-	-

University C Regression Results: Dependent Variable = Organizational Commitment

University C – All Employees (N = 171)

Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Power	0.49	0.49	0.24	0.49	<0.01
Rewards	0.43	0.65	0.42	0.43	<0.01
Info	0.29	0.71	0.51	0.29	<0.01
Knowledge	-0.01	-	-	-	-

University C – Support Staff (N = 62)

Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Power	0.42	0.42	0.18	0.47	<0.01
Rewards	0.28	0.54	0.29	0.40	<0.01
Info	0.31	0.65	0.42	0.36	<0.01
Knowledge	-0.17	-	-	-	-

University C – Faculty (N = 48)

Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Power	0.61	0.62	0.38	0.59	<0.01
Rewards	0.47	0.57	0.55	0.43	<0.01
Info	0.02	-	-	-	-
Knowledge	0.06	-	-	-	-

University C – Administrators (N = 61)

Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Rewards	0.52	0.52	0.27	0.46	<0.01
Info	0.42	0.66	0.44	0.40	<0.01
Power	0.40	0.73	0.53	0.31	<0.01
Knowledge	-0.10	-	-	-	-

University D Regression Results: Dependent Variable = Organizational Commitment

University D – All Employees (N = 187)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Rewards	0.46	0.46	0.21	0.47	<0.01
Info	0.41	0.62	0.39	0.43	<0.01
Power	0.36	0.72	0.52	0.36	<0.01
Knowledge	0.12	0.73	0.54	0.14	0.01

University D – Support Staff (N = 73)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Info	0.45	0.45	0.20	0.54	<0.01
Rewards	0.34	0.57	0.32	0.42	<0.01
Power	0.18	0.68	0.46	0.39	<0.01
Knowledge	0.01	-	-	-	-

University D – Faculty (N = 51)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Rewards	0.48	0.48	0.23	0.48	<0.01
Power	0.28	-	-	-	-
Info	-0.05	-	-	-	-
Knowledge	-0.12	-	-	-	-

University D – Administrators (N = 63)					
Independent Variable	Simple Correlation	Multiple R (cumulative)	Multiple R² (cumulative)	Partial Beta (Final)	Significance
Power	0.50	0.63	0.40	0.42	<0.01
Info	0.53	0.53	0.29	0.39	<0.01
Rewards	0.30	0.73	0.53	0.36	<0.01
Knowledge	0.18	-	-	-	-

APPENDIX G – CHARTING OF INVOLVEMENT PRACTICES

Appendix G - Chart 1: Power Practices versus Employee Perceptions

Chart 1a - Power Practices vs. Perceptions (Staff)

Legend: Number of Practices, Staff Perceptions

Chart 1b - Power Practices vs Perceptions (Faculty)

Legend: Number of Practices, Faculty Perceptions

Chart 1c - Power Practices vs Perceptions (Admin.)

Legend: Number of Practices, Administrator Perceptions
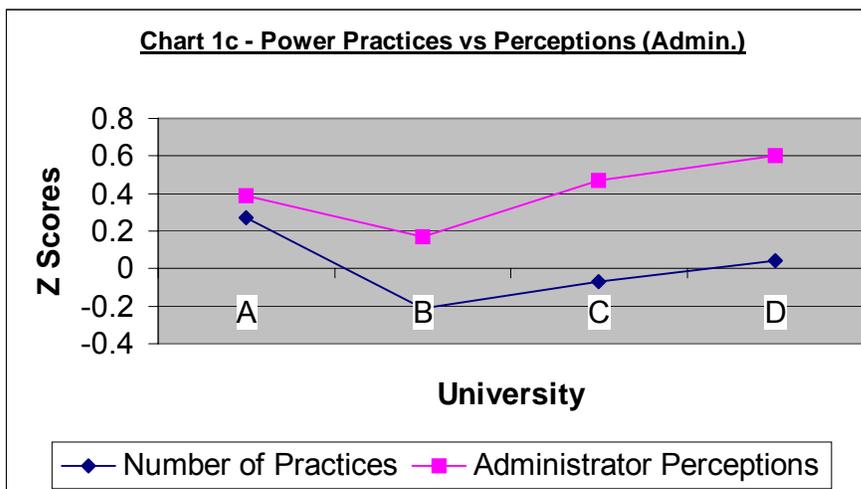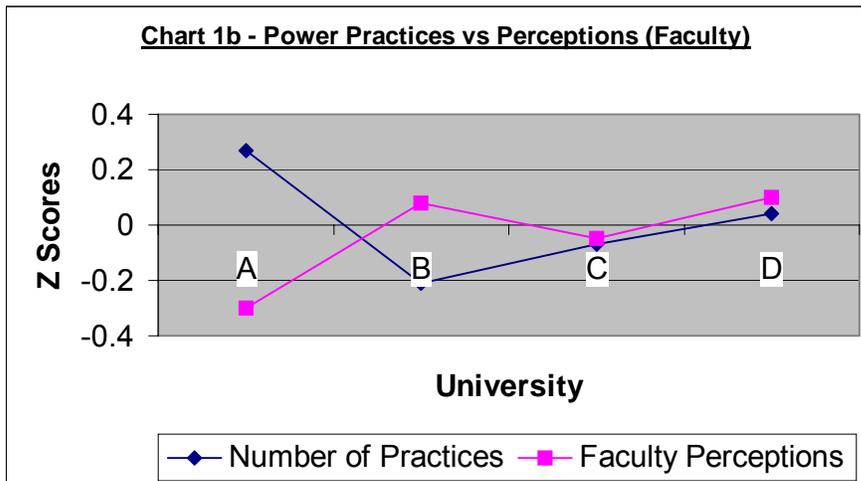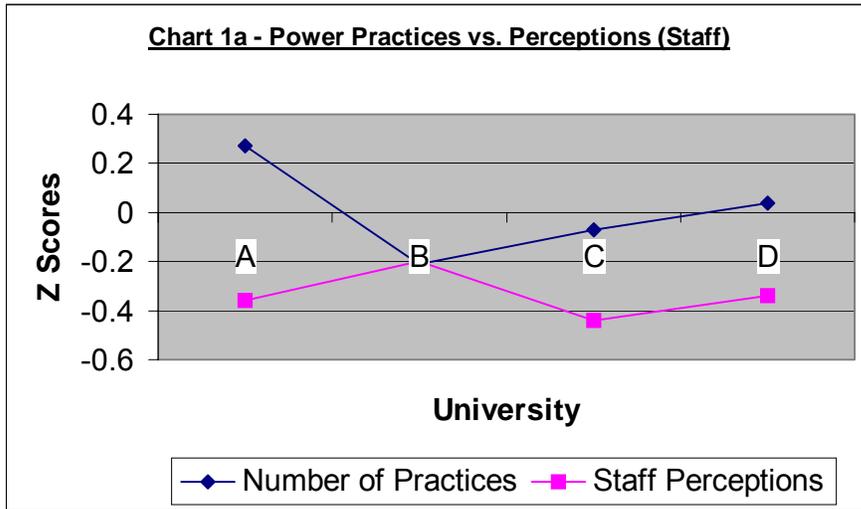
Appendix G - Chart 2: Reward Practices versus Employee Perceptions

Chart 2a - Reward Practices vs. Perceptions (Staff)

Chart 2b - Reward Practices vs Perceptions (Faculty)

Chart 2c - Reward Practices vs Perceptions (Admin.)
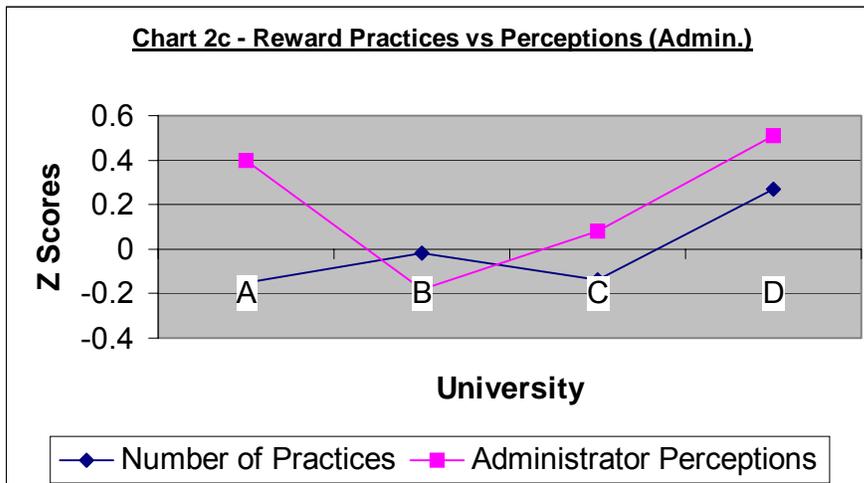
Appendix G - Chart 3: Information Practices versus Employee Perceptions

Chart 3a - Information Practices vs Perceptions (Staff)

Chart 3b - Information Practices vs Perceptions (Faculty)

Chart 3c - Info Practices vs Perceptions (Admin.)
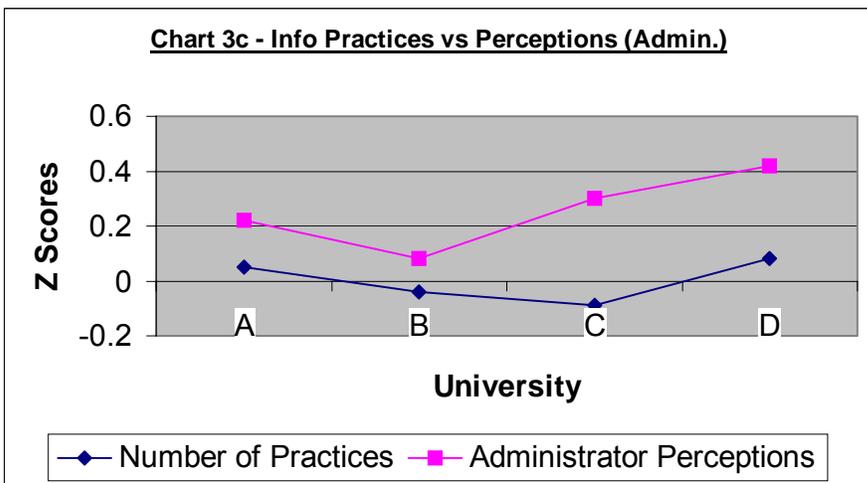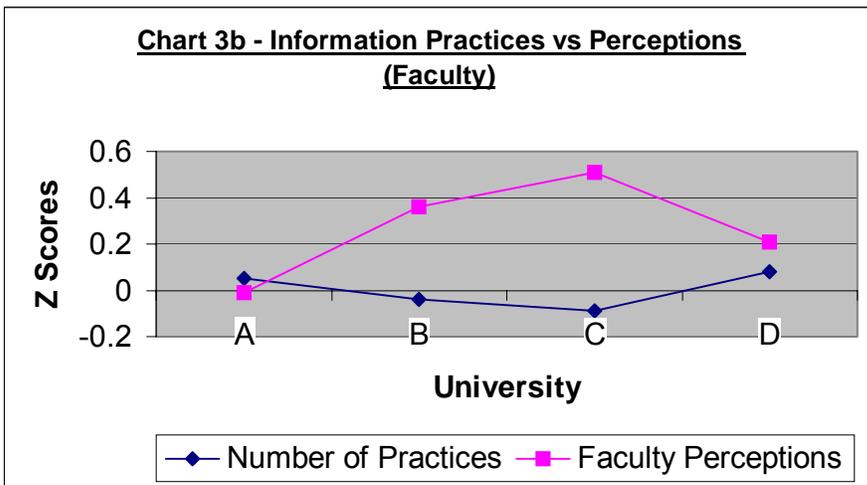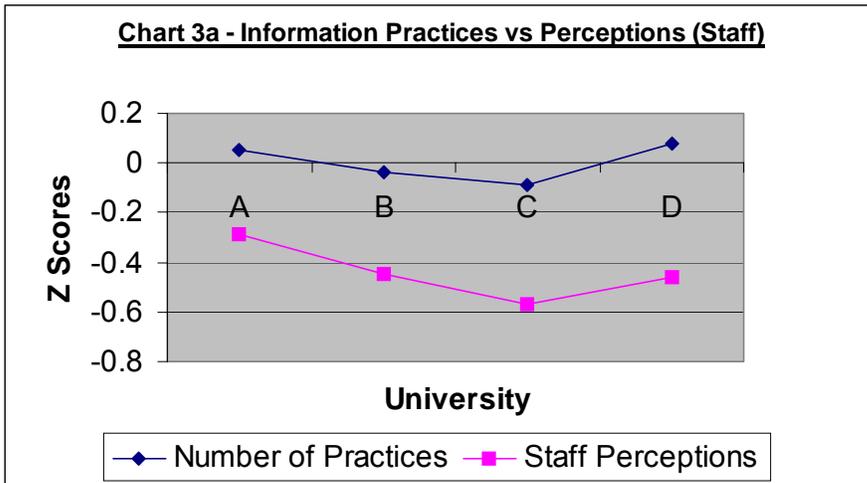
Appendix G – Chart 4: Knowledge Practices versus Employee Perceptions

Chart 4a - Knowledge Practices vs Perceptions (Staff)

Chart 4b - Knowledge Practices vs Perceptions (Faculty)

Chart 4c - Knowledge Practices vs Perceptions (Administrators)
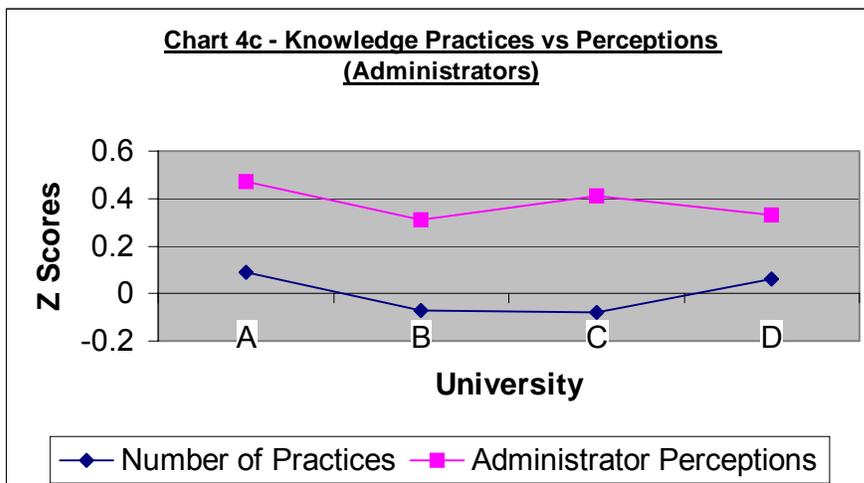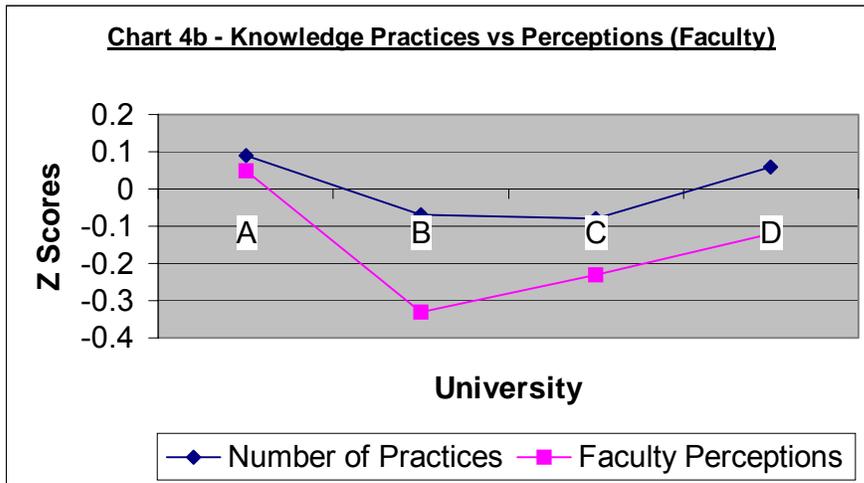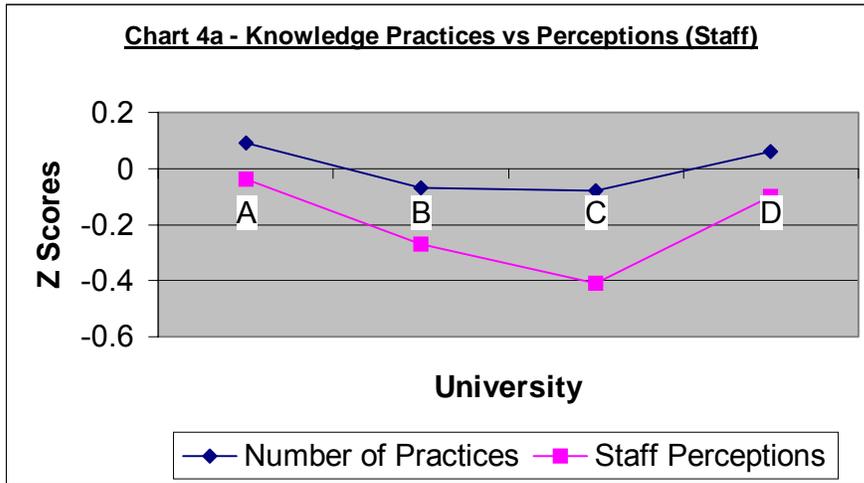
Appendix G – Chart 5: Average PRIK Practices versus Employee Perceptions

Chart 5a - Average PRIK Practices vs Perceptions (Staff)

Chart 5b - Average PRIK Practices vs Perceptions (Faculty)

Chart 5c - Average PRIK Practices vs Perceptions (Administrators)
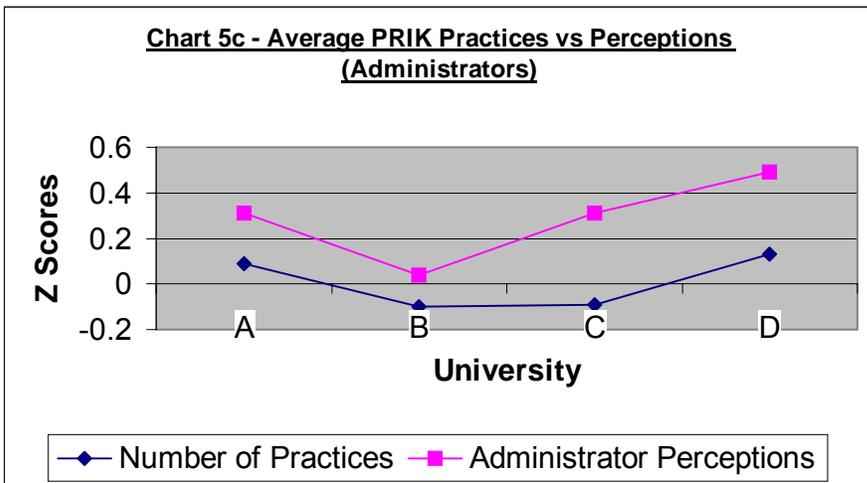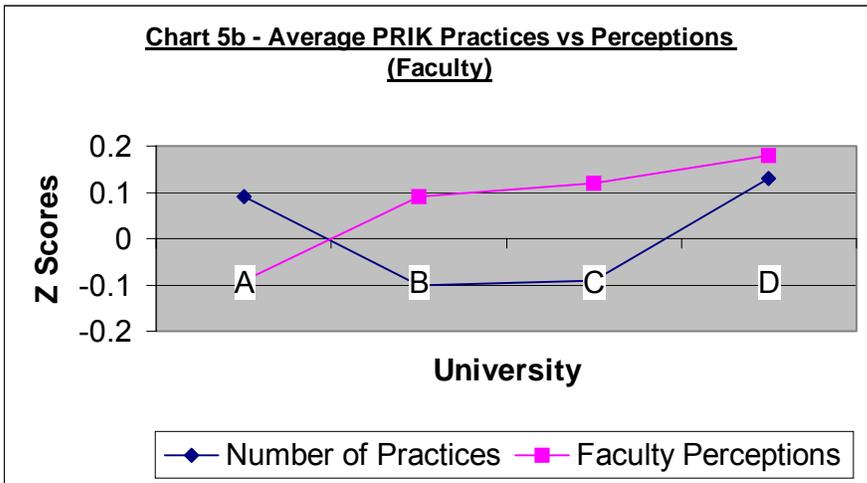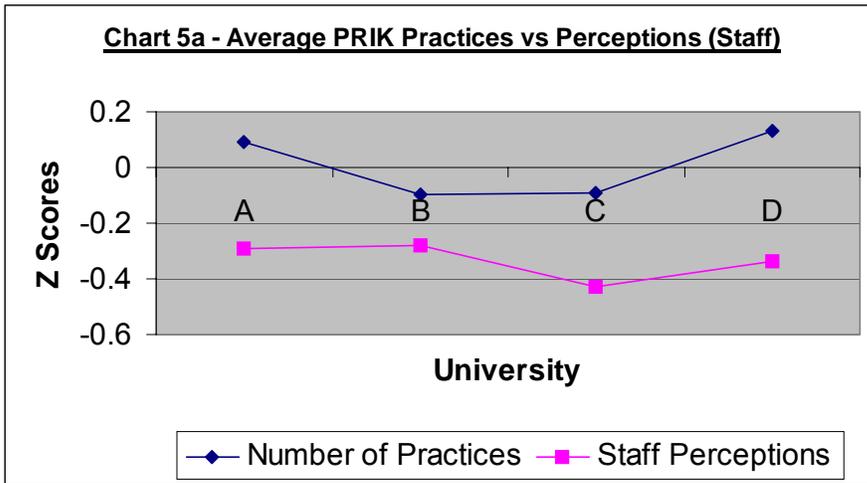
APPENDIX H – CHARTING OF PERFORMANCE INDICATOR RANKINGS

Performance Indicator 1 - SAT Scores

Legend: Organizational Commitment — PRIK — PI 1 -SATs

Performance Indicator 2 -Transfer Students

Legend: Organizational Commitment — PRIK — PI 2 -Transfer Students

Performance Indicator 3 - 2nd Year Persistence

Performance Indicator 4 - 4 Year Retention

Performance Indicator 5 - 6 Year Graduation Rate

Performance Indicator 6 - Employment Rate of Recent Graduates

Performance Indicator 7 - Undergrad Instructional Cost per Credit Hour

Performance Indicator 8 - Grad Cost per Credit Hour

Performance Indicator 9 - Estimated Student Costs

Performance Indicator 10 - Unrestricted Education &
General Cost Per Student

Performance Indicator 11 - Maintenance Costs per Est Replacement Cost

Performance Indicator 12 - Maint Exp per E&G Budget

Performance Indicator 13 - Fund Raising per Full Time Equivalent Students

Performance Indicator 14 - Endowment per Full Time Equivalent Student

Performance Indicator 15 - Budgetary Flexibility

Performance Indicator 16 - Financial Operating Ratio

Performance Indicator 17 - Minority Enrollment

Performance Indicator 18 - Female Enrollment

Performance Indicator 19 - Minority Graduation

Performance Indicator 20 - Female Graduation

Performance Indicator 21 - Minority Faculty

Performance Indicator 22 - Female Faculty

Performance Indicator 23 - Minority Non-faculty Employees

Performance Indicator 24 - Female Non-faculty Employees

Chart 1 - Sum of Rankings on Student Advancement Indicators

Chart 2 - Sum of Rankings on Financial Indicators

Chart 3 - Sum of Rankings on Diversity Indicators

VITA FOR CHRISTOPHER A. BOWLING

EDUCATION

Institution: The Pennsylvania State University *Date Awarded:* August 2006
Degree earned: Ph.D. *Subject:* Public Administration

Areas of Concentration/Research Topics
Political Institutions – Bureaucracy, Strategic Management, Accountability & the Media
Public Management – Financial Management & Reporting, Entrepreneurial Government
Organization Theory – Organization Design & Control, Organizational Culture

Institution: Shippensburg University of PA *Date Awarded:* December 1992
Degree earned: MPA *Subject:* Public Administration

Institution: University of Pittsburgh *Date Awarded:* April 1983
Degree earned: BA *Subject:* Business Economics

PROFESSIONAL WORK EXPERIENCE

Employer: PA State System of Higher Education *Date:* August 2001 to Present
Title: SAS System Administrator - Finance *Location:* Harrisburg, PA
Duties: Managed a five member team of financial professionals responsible for
developing and maintaining an enterprise wide shared administrative system (SAS).
Activities include: production support, rolling out application enhancements, developing
and delivering end user training, configuring and testing additional functionality.

Employer: Shippensburg University of PA *Date:* June 1992 to August 2001
Title: Director of Accounting *Location:* Shippensburg, PA
Duties: Responsible for GAAP based external financial reporting (including financial
statement preparation) and for internal reporting based on in-house developed costing
methodologies. Acted as liaison with external auditors.

PROFESSIONAL CERTIFICATIONS and MEMBERSHIPS

Certified Public Accountant – Pennsylvania (1987)
Member - Pi Alpha Alpha Public Administration Honor Society (2001)
Member – American Society for Public Administration (2001)