

Applying the Competing Values Framework to Self-Managed Teams

Abstract

Self-managed teams (SMT) are becoming a necessary component of organizational effectiveness. The use of SMTs enhances individuals' attitudes, behaviors, and performance. Self-managed teams are made up of individuals who are self-regulated and responsible for a number of operations. Within SMTs, the leadership role is an important component of team effectiveness. Past research on leadership within SMTs, while limited, has focused mostly on the external leader. What is difficult to determine is the type of leadership necessary in leading a team that is designed to lead themselves. As a result, recent research is beginning to address shared leadership within teams. Most leadership theories are not applicable to SMTs; therefore, a theory on how to identify leadership roles within SMTs could be identified. The Competing Values Framework seems to fit this need.

The use of the Competing Values Framework (CVF) is useful in understanding SMTs and the leadership roles within these teams. The CVF is a framework made up of leadership roles and models. It provides an understanding of how a team is effective by the use of different leadership roles. It adopts the need for a balanced and shared approach to leadership. Individuals within the team must rely on each person to accomplish tasks. Most leadership theories focus on the ability and specific qualities of one emergent leader, whereas the CVF addresses the use of numerous leadership roles by each person.

The purpose of this article is to relate the leadership profiles of the Competing Values Framework to effectiveness in self-managed teams for undergraduate students at a major Midwestern University majoring in engineering, computer science and business. For the

purposes of this article, team effectiveness is characterized by attitude and performance. Attitude is defined as the commitment the members have to the team creating positive experiences.

Performance is defined by the final grade received by the team and instructor response to team members' behaviors and performance. Leadership roles (also known as leadership profiles) will be measured through the Managerial Behavior assessment tool developed by Lawrence, Quinn, and Lenk [25]. Team effectiveness will be measured through attitudinal questions from the Team Effectiveness Questionnaire, instructor response, and grade reports.

Teamwork activities assist in preparing engineering students on how to effectively work in teams upon graduation. Many institutions have implemented methods such as collaborative learning, cooperative learning, and other forms of active learning to help promote teamwork in the classroom. This study will help researchers and engineering educators identify the necessary leadership roles within teams and how these roles will positively impact team effectiveness. As a result, instructors can design their teamwork curricula and teamwork training based on the leadership strengths and skills of students.

Introduction

The increase in global competition has created a need for more innovative and faster work structures [17]. A remedy for this challenge in organizations is the utilization of teams. The team is the fastest growing organizational unit [30]. One of the most common skills required of employees by organizations is teamwork skills [12]. As a response to the popularity of teams, academia has identified the subject of teams and team effectiveness as a significant area of research [12].

Of particular interest for this study is the usage of self-managed teams (SMTs). Self-managed teams are made up of individuals who are self-regulated and responsible for a number of operations within the organization. This non-traditional hierarchical structure creates a flat organizational structure in which more responsibility is placed on the employees of the organization. As a result, the role of leadership is an important component of effectiveness in SMTs. It has been proposed that leadership in SMTs is more important and more demanding than in traditional teams or organizations [22], [5]. In a self-managed team, leadership responsibilities shift from one individual to the entire team.

Previous research on leadership in SMTs, while limited, has focused predominately on the significance of the external leader [27],[28], [29], [35]. Focusing on the external leader is contrary to how a self-managed team operates. Leadership in these situations is determined by the skills of the team members and the needs of the team. The diversity of ideas and skills of each team member allows them to carry out a variety of leadership roles throughout the team experience [30]. Consequently, organizations are “ripe for shared leadership” in self-managed teams [30]. Shared leadership assumes that each member of the team is a leader contributing different skills to the team and fulfilling distinct roles necessary for completing tasks.

There is a need to determine the type of leadership required when leading a team designed to lead themselves as well as identifying an appropriate theoretical framework of effective leadership in self-managed teams [6], [38]. A response to this need is the use of the Competing Values Framework (CVF) [6], [40].

The Competing Values Framework is useful in understanding shared leadership within SMTs. The framework is designed to reflect the complex and paradoxical roles played out by organizational leaders [32]. It is made up of four leadership profiles (also known as quadrants)

that influence organizational effectiveness. This framework provides an understanding of how a SMT is effective by the use of different leadership roles [6]. It adopts the need for a shared approach to leadership in SMTs. Most leadership theories focus on the abilities and specific qualities of one external or emergent leader, whereas the CVF can address the use of numerous leadership roles by individual team members [6], [5].

The purpose of this article is to relate the leadership profiles of the Competing Values Framework to effectiveness in self-managed teams for undergraduate students at a major Midwestern University majoring in engineering, computer science, and business.

Teams

Traditionally, teams have been used to respond to changes in organizations and instrumental towards achieving higher performance. The term, team, carries a wide variety of definitions and forms depending on the discipline. Research shows that teams are incredibly dynamic. The descriptions of teams are continually evolving – depending on the situation, environment, and task. For the purposes of this article, the definition developed by Katzenbach and Smith [24] will be utilized: “A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable” (p.45). Katzenbach and Smith [24] created this definition that goes beyond defining a group of people who work together. Their definition is one of the most comprehensive definitions available in team literature.

Self-managed teams (SMT) will be the type of team focused on throughout this study. Self-managed teams have increased in their use since the 1990s due in part to reduced levels of management, an increase in employee involvement, and productivity in organizations [21]. Self-

managed teams are an effort to increase flexibility and responsiveness in today's work situations [17]. The use of teams enhances individuals and their work more than the individual working alone. In a SMT, resources are more adequately used, flexibility in the work environment is increased, and total production is improved.

A self-managed team is given the authority to make their own decisions in regards to the task and development. The amount of external supervision required in a SMT is at a minimum. Team members learn to take responsibility for themselves in all aspects of their work. An important characteristic of a SMT is the power of people. Fisher [17] says that people are the competitive advantage. Commitment by members results in their empowerment and consequently creates an effective self-managing team. "Self-directed work teams are the most advanced form of empowerment" (p.14).

Cummings [16] offered a characterization of self-managed teams that is appropriate for the purposes of this study. Self-managed teams are responsible for the whole task they are assigned. The whole task includes (but not limited to) planning, scheduling, managing resources, and defining goals. Members of self-managed teams hold a variety of skills and play a variety of roles pertinent to the goals of the team. Lastly, compensation and feedback is made available to the team as a whole.

For the purposes of this study, the definition of a SMT developed by Adams [1] will be utilized: "A small group of individuals responsible for planning, scheduling, evaluating, and continually improving themselves and their work" (p.21).

Self-Managed Team Outcomes

Typically, positive outcomes for self-managed teams are most noticeable in performance and employee relations [1]. SMTs increase productivity, decrease costs, and improve overall quality of the working environment. The outcomes of employee relations translate to an increase in positive employee attitudes and increased responsibility. The leadership of self-managed teams is of particular interest in this study. An explanation of the research on leadership in self-managed teams along with definitions of distributed and shared leadership will be subsequently explained.

Leadership in Self-Managed Teams

Research on leadership in SMTs has typically focused on the emergent leader of the team or on the external leader. Stewart and Manz [35] defined leadership in SMTs as: "...guidance and direction provided to a team by someone functioning in a role constituting formal authority to influence the team" (p.750). Stewart and Manz [35], Manz and Sims [29], and Cohen et al. [12], [13] are a few of the (most significant) researchers who conducted studies on leaders in SMTs, but addressed only the external leader.

Manz and Sims [29] identified six leadership behaviors that determine effectiveness of SMTs. These behaviors derived from self-management theory. These behaviors are to be enacted by one, emergent leader of the team, which Manz and Sims called the coordinator. These leadership behaviors were not originally intended to be shared amongst the team members.

Cohen et al. [13] researched the leadership behaviors of the external leader of a self-managed team also. Through this study it was found that the supervisory behavior of the external leader had a negative effect on the performance for self-managed teams [13], [12]. Cohen, et al.

[13] also quoted a study by Beekun (1989) which found self-managed teams performed better without internal supervisors than those with supervisors.

Nevertheless, the research on leadership in SMTs has evolved over the years. Once focusing on the external leader or an emergent leader of the team, researchers such as Manz, Sims, and Pearce have identified a different type of leadership in SMTs that is mutually shared and focuses on the various roles of team members. This form of leadership is called, shared leadership.

Shared Leadership

It was presented earlier that organizations today are eager for shared leadership in teams [30]. The problem is that research in this area is minimal and still developing. Pearce and Conger [30] edited the book, “Shared Leadership: Reframing the How and Whys of Leadership,” in which numerous ideas and theories are put forth about shared leadership. The variety of the topics shows how diverse and evolving the field still is. However, even in its infancy, shared leadership is an important condition in SMTs that determines effectiveness. In its simplest form, shared leadership as defined by Cox, et al.[14] as a condition where teams collectively exert influence. Within shared leadership there is lateral peer influence and frontline empowerment [14]. Leadership in self-managed teams should be distributed amongst all team members depending on their skills, abilities, and the task. Leadership should not be the responsibility of one internal or external individual. Pearce and Manz [31] identified the use of shared leadership as an example of the full use of empowerment in teams.

For the purposes of this article, the definition of shared leadership is [30], “Leadership is broadly distributed among a set of individuals instead of centralized in hands of a

single/individual who acts in the role of a superior” (p.1). Stated concisely, shared leadership is identified through the use of various leadership roles in SMTs.

Distributed Leadership

A discussion of distributed leadership is presented in this section because it helps create a practical picture of shared leadership in teams. The distributed leadership model was created as a response to describing effective leadership in SMTs. The basic premise is that roles and behaviors in a SMT are split, shared, and rotated. The precise roles should be present at the appropriate time, depending on the task and environment the team is operating in. The leadership shifts as the needs of the team shifts. The type of leadership roles displayed depends on the strengths and abilities of the team members. Multiple leaders exist in a team and each has a complementary role to each other. Leadership roles are collaboratively determined. Team members adjust to each others behaviors and responsibilities.

The distributed leadership model consists of four broad clusters of leadership [5]. All are mutually exclusive and performance of the team will suffer if one cluster is over or under represented. The four clusters are:

1. **Envisioning:** generating ideas and a vision for the team
2. **Organizing:** provide order to the team; concentrate on deadlines and time management; bring focus to the team’s goals and purpose
3. **Spanning:** bridge the link between the team and other outside teams/customers; practice networking and maintaining the team image
4. **Social:** focuses on the emotional well-being of the team; meets the emotional needs of the members; encourages listening and participative discussion

In closing, Barry [5] believed that leadership has an advantage when there is a heterogeneous leadership style in place. However, conflict can occur because of the differences in leadership roles within the team. He proposed that the only way the differences can be resolved is if the team members are made aware of the coexistence of the differing roles and how they each play a role in the effectiveness of the team [5]. In other words, training is critical. He suggested that team members be selected carefully; the team should be given enough time to develop the distributed leadership model; and management (external leadership of the team) should encourage the use of multiple leaders.

Shared leadership and distributed leadership support the type of leadership needed in student teams. Both Adams [2] and Buckenmyer [8] cite the importance of leadership roles in student teams. If provided a clear understanding of their roles, students are more likely to have an effective teaming experience [2], [8]. Buckenmyer [8] specifically indicated that in undergraduate teams, team members typically become social loafers. These members do not complete the tasks to its potential and do only enough to “get by”. However, if educators provide practical, useful team training instead of theoretical training, then students will be prepared to understand and fulfill their role as a leader in teams. Because student teams are limited in the amount of time they spend together, and do not have time to build significant relationships (over time), training in the area of leadership roles is a critical component for success. This model will assist educators in their development of student teams.

Although useful, both shared leadership and distributed leadership model have setbacks. In response to those setbacks, Belasen [6] proposed the application of the Competing Values Framework (CVF) to give explanation to leadership within SMTs. Because shared leadership is

recognized as a variety of leadership roles distributed amongst members of the team, a way to identify and measure these roles is to refer to the CVF model.

Competing Values Framework

The Competing Values Framework introduced by Robert E. Quinn asks the question, “What makes a manager effective in their organization?” The framework assists leaders of organizations to work in comprehensive and consistent ways to improve overall performance. The CVF clarifies leadership roles and expectations which minimizes ambiguity and avoids interpersonal conflicts within the organization [7].

The framework displays the tensions and contradictions that organizations and leaders encounter in their evolving and changing environments [9], [25], [10]. For instance, each continuum highlights a value that is opposite from the value at the other end of the range, i.e. flexibility vs. stability and internal vs. external [10]. The framework is divided by two axes. The axes and quadrants indicate the type of effectiveness demonstrated by the leader or the organization – depending on which is being measured. The horizontal axis demonstrates the level of organizational focus; either internal or external. The vertical axis demonstrates the level of adaptability; either flexible or controlled [32], [25], [34]. These axes readily demonstrate the competing values experienced in organizations.

The two axes split the framework into four competing quadrants (also known as profiles). The quadrants are: *Relating to People* (human relations model); *Leading Change* (open systems model); *Managing Processes* (internal process model); and *Producing Results* (rational goal model) [25], [34], [32]. Each quadrant has a competing opposite. For instance, the *Relating to People* quadrant emphasizes a flexible structure and an internal focus. Its exact opposite is the *Producing Results* quadrant that emphasizes a stable structure and an external focus. This

example demonstrates the complexity that occurs for leaders. On one hand, leaders should value relationships within the organization and make certain that the organization is flexible to support relationships. On the flip side, results are an important element of any organization and maintaining a stable structure is a significant factor in producing results [32]. Quinn [32] did not suggest that these quadrants can not equally exist. However, he argued that the criteria, values, and assumptions are oppositions in our minds [32]. Leaders sometimes believe they are extremely different and make assumptions that they are mutually exclusive [32]. See figure 1 for a depiction of the four profiles.

Leadership Roles & Profiles of the CVF

Within each of the four quadrants are eight leadership roles. These roles focus on the effectiveness of the leaders within organizations. The framework demonstrates competing roles and expectations experienced by a leader [34]. Table 1 (see Appendix A) provides an outline of each quadrant and its accompanying leadership role [33], [25]. The roles are both differentiated and integrated [7]. It is possible for managers to display up to three roles at one time [25]. “The value of this framework is in allowing managers to pursue a systematic journey of self-directed learning and self-development by helping them identify relative weaknesses and strengths and enhance their competence level” [7].

Through conversations with Katherine Lawrence, co-author of the CVF Managerial Behavior Instrument, it was brought to the researcher’s attention that the findings in the Lawrence et al. [23] paper suggested a modification of the original leadership roles. Table 2 and figure 2 (see Appendix A) will display the 12 new roles of the modified framework. The broker and director roles were eliminated, leaving six of the original eight roles (facilitator, mentor,

innovator, monitor, coordinator and producer). Six new roles emerged from the authors' analysis, supplementing the remaining six. The new roles are empathizer, visionary, motivator, enforcer, driver and competitor. The modified role structure is very consistent with the original quadrants and now reflects a sounder psychometric base [23].

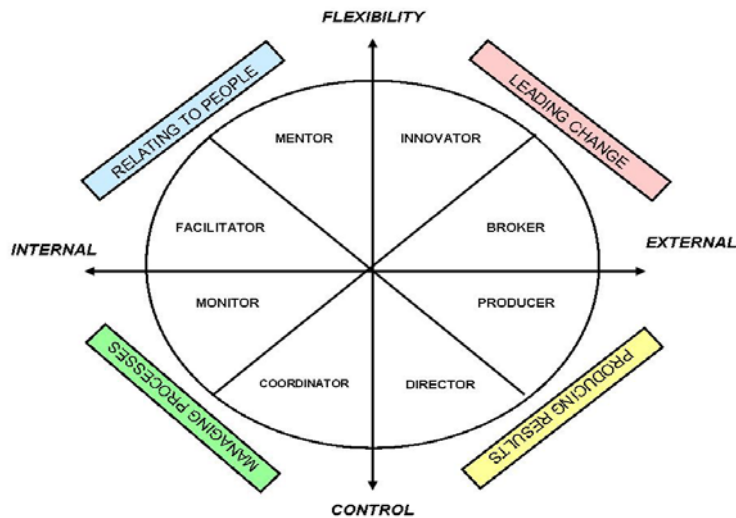
Because of this change, an emphasis is placed on the identification of the four quadrants in teams instead of the leadership roles. These four quadrants will be referred to as *leadership profiles*. The four profiles are as follows: Relating to People, Leading Change, Managing Processes, and Producing Results. Focusing on this change will fit with the validity of the instrument.

Competing Values Framework and Self-Managed Teams

The challenge of SMTs can be identifying and enacting an appropriate leadership model for a team that manages itself. Because of this challenge, the idea of applying the CVF to SMTs will now be discussed.

Belasen [6] identified the previously mentioned problem and set out to explain how the CVF can be used to explain and identify leadership within self-managed teams. He stated that because self-managed teams lack an emergent leader or typical supervisory structure, it is necessary to identify the various roles displayed throughout the life cycle of a self-managed team [6]: "The challenge facing organizational researchers and theorists is to develop a theory that captures the complexity and dynamics of self-managed team leadership roles and communication processes" (p.86).

Figure 1. Leadership roles and profiles of the Competing Values Framework



Note. From *Beyond Rational Management*, by R.E. Quinn, Jossey-Bass. Copyright 1988; *Becoming a Master Manager: A competency framework*, by R.E. Quinn, S.R. Faerman, M.P. Thompson, and M.R. McGrath, John Wiley & Sons. Copyright 1996.

It is suggested in Belasen's [6] article that the CVF be applied to a team concept. Instead of expecting one person to perform all of the leadership roles, the entire team performs them. The competing values approach accounts for the complexities inherent in SMTs. It provides an understanding of how a SMT is effective by the use of different roles and skills. It adopts the need for a balanced approach to leadership. In other words, one person/leader can not do it all. Most leadership theories focus on the ability and specific qualities of one emergent leader, whereas the CVF addresses numerous (and needed) leadership roles.

Belasen [6] provided a description of how each leadership profile can contribute to SMT effectiveness:

1. *Relating to People*: Develop peer relationship, provide overall supportive social roles; build cohesion and teamwork, and manage interpersonal conflict

2. *Producing Results*: Identify clear goals, time management, resource allocation, reward and recognition for the team, task master, focused, high productivity, fosters commitment, challenge, purpose, control, and balance
3. *Leading Change*: Gatekeepers, networkers, communicators, adaptability and responsiveness of the team to the external environment, creativity of change and transition
4. *Managing Processes*: Maintains structure and flow of work and information, project planning, tools and resources, resource allocation, balance the social and technical aspects of the group, feedback provider, track and analyze process variation, and compliance with work standards

Summary

As indicated by the literature there is a need to apply a theoretical framework to leadership in SMTs. The investigation of the literature highlighted the emphasis on the development and skills of the external leader of a team. The nature of SMTs, however, calls for a framework that describes the type of leadership qualities needed in a team that is not led by one individual. This article will relate the leadership profiles of the CVF to effectiveness in SMTs and will add to the field of the teaming research by applying a theoretical framework to leadership in teams.

The American Society of Mechanical Engineers (ASME) found that teamwork and communication skills are two attributes most desired by employers [2], [4]. Although technical skills are critical in the success of graduates; technical skills are only part of the package. Teamwork skills are a necessary component [19]. Students however, are lacking these skills. The ability to work in teams is especially lacking [2], [4], [19].

There is a need to better prepare students at the collegiate level to effectively work in teams [39]. Teamwork activities assist in preparing engineering students on how to operate in teams upon graduation. This article will help researchers and educators identify the necessary

leadership roles within teams and how these roles will positively impact team effectiveness. As a result, educators can design their teamwork curricula and teamwork training based on the leadership strengths and skills of students. In addition, students can gain a better appreciation of teamwork and how it can positively effect their education and future work experiences.

Furthermore, educators can learn how to design student teams based on the leadership profiles of each team member. An assessment of the leadership profiles of each team member will increase awareness of skill deficiencies in each team. For instance, designing team training can be based on the results of the CVF to further develop team members' leadership skills and design an effective team [6]. In addition, because the profiles are competing, it is important that team members are made aware of these competing profiles and how each profile is significant for the effectiveness of the team. This awareness will ideally decrease power struggles and/or miscommunications that so often occur in teams [40].

Methodology

Population and Sample

Participating in this study will be approximately 60 freshman and sophomore undergraduate honor students, making up 15 self-managed teams, with 4 students per team. The majors of these students consist of engineering, computer science, and business. The quantitative sampling strategy used in selecting the population was non-probability, convenience sampling [15]. The population was readily available and convenient. In addition, the population represented some characteristics of the target population. The student teams resemble self-managed teams in the following ways: (a) self-led, (b) shared responsibility, (c) shared goals, and (d) high autonomy. Each team is assigned a team project for the 2006 spring semester.

Instrumentation

The measuring instrument for the independent variable is the 36-Item Managerial Behavior Instrument developed by Lawrence, K.A., Quinn, R.E., & Lenk, P. [25] from the article, “Behavioral Complexity in Leadership: The Psychometric Properties of a New Instrument”. The instrument identifies leadership profiles exhibited by managerial leaders. For example, the instrument measures whether or not a manager operates in the *Relating to People* profile or the *Producing Results* profile. Permission was given by Lawrence, K.A. to adjust the instrument to fit teams. The essence of the items on the instrument was not changed. Instead, attention was given to vocabulary and grammar. The adjusted version was reviewed by the researcher’s advisor, the author of the instrument, a research assistant of the Effective Teaming Lab at a major Mid-Western University, and a leadership development graduate student. These individuals provided critiques of the instrument, contributing to the face validity of the instrument.

Lawrence, et al. [25] developed a psychometrically sound instrument for measuring behavioral complexity. “Our data largely supports the theoretical structure and stringent demands of the CVF model as applied to this measurement instrument. This new instrument should prove to be a valuable tool for exploring the behavioral complexity of leaders” (p.1). The reliability coefficients were positive however, the Cronbach’s alpha for the scales were not as good as researchers had hoped, but were very close to the set criterion [25]. The criterion was set at .70 and the scale of scores ranged from .69-.93. See Appendix A, table 3 for the reliability coefficients of the behavioral scales [25].

The attitudinal measures were drawn from the Team Effectiveness Questionnaire (TEQ), developed by the Effective Teaming Lab at the University of Nebraska-Lincoln, under the direction of Dr. Stephanie G. Adams. This instrument was developed to measure the effectiveness of students working in teams. The attitude of team members is one of the variables measured by the TEQ. The survey contains 7 items measuring attitudes of team members and will be completed as a self-assessment. The participants will not evaluate the attitudes of their fellow team members. These 7 items measure the experience and commitment of the team members as a result of their team experience. The reliability coefficients reported for the attitude measures in February of 2005 were .838. Cronbach's Alpha was the statistical test used to examine the internal consistency of the attitudinal measures. Content validity was determined by consulting the teaming literature and available experts in the field of teams [37].

The performance outcomes will be measured based on the comments of the instructor concerning the performance of each team, in addition to each team's grade on their final team assignment.

Data Analysis

Because of the small sample size, it is appropriate to conduct both parametric and non-parametric group mean comparisons. Parametric tests are concerned with assumptions about the shape of the population distribution and other population parameters [20]. These tests require a numerical score for each individual and data from an interval or ratio scale (p.579). Non-parametric tests use sample data to evaluate hypothesis about proportions or relationships within populations [20]. Measurement is classified on nominal or ordinal scales. (In this case, low behavioral complexity or high behavioral complexity.)

How the data is analyzed depends on the distribution of the outcome variables [41]. If the outcome variables have normally distributed outcomes and equal variances then the independent-measures t-test is an appropriate test. The design of the independent measures t-test involves separate and independent samples and compares the groups [20]. If the outcome variables are normally distributed and unequal variances then the Welch's test is an appropriate test [42]. If they are not normally distributed (which may be the case because of the small sample size), but have equal variances, then the Mann-Whitney test is appropriate [41]. The Mann-Whitney test uses data from two separate samples to evaluate the difference between two populations [20]. If the outcome variables are non-normal and unequal variances then the Welch's test on the ranks is an appropriate test. In this case a t-test would be run on the ranks and not on the raw data [3].

Results

At this time the results are not available. Data will be collected in mid-February. The results will be made available at the time of the presentation. The researcher does expect to find a positive relationship between the presence of the leadership profiles and team effectiveness. Teams that have the presence of three or more of the leadership profiles will have higher grades, a more positive attitude, and positive teacher remarks than teams who have the presence of only one or two of the leadership profiles.

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APPENDIX A

Tables

Table 1. CVF Leadership Quadrants & Roles

Quadrant	Leadership Roles	Functions
Relating to People	Mentor	Acknowledge personal needs Develop people Caring, empathetic, listens Help members grow and develop
	Facilitator	Acknowledge personal needs Develop people Practices participation & teambuilding Consensus building Managed conflict Participative decision-making & discussion
Managing Processes	Monitor	Clarify policies Expect accurate work Control projects Monitor progress on tasks, objectives Develops measures & checkpoints
	Coordinator	Clarify policies Expect accurate work Control projects Brings a sense of order Plans the schedule, organizes, stability, control, continuity
Producing Results	Producer	Focuses on competition Emphasize speed Shows hard work ethic Can do attitude Gets people into action Ability to accomplish goals Makes profits, initiates action
	Director	Focuses on competition Emphasize speed Shows hard work ethic Provides direction, clarify priorities Communicates vision Plans, prioritizes, clarifies Provides structure
Leading Change	Innovator	Inspire people Anticipate customer needs Initiate significant change Innovative ideas Experiment Problem solving in creative ways Search for improvements Adaptability
	Broker	Inspire people Anticipate customer needs Initiate significant change Access to "higher-ups" Sells ideas Influence decisions at higher levels Acquires needed resources Influences, negotiates

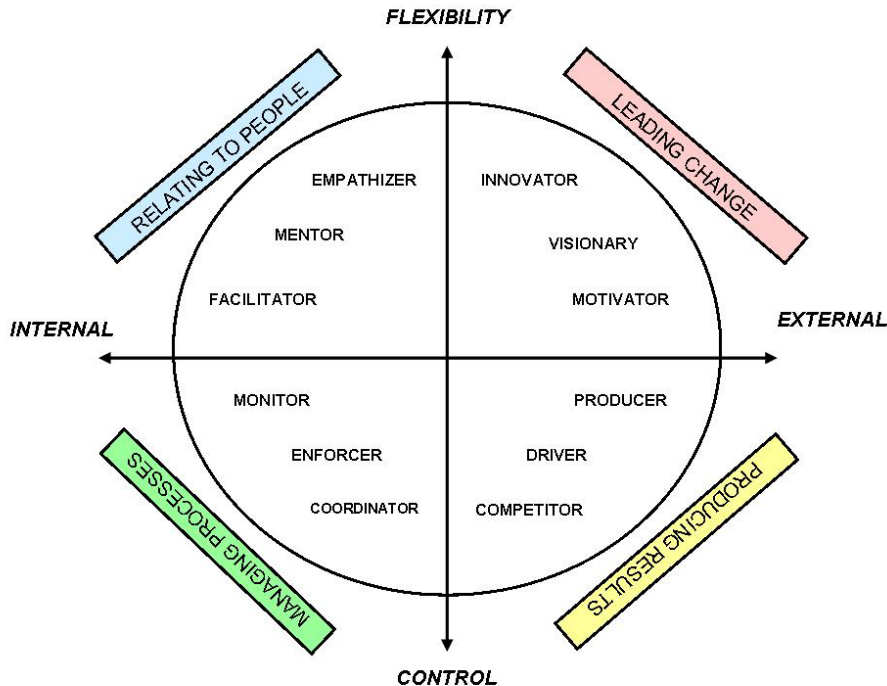
Table 2. 12 New roles of the modified framework

8 Previous Roles	Behaviors	12 New Roles	Behaviors
Facilitator Role	Encouraging Participation	Facilitator Role	Encouraging Participation
Mentor Role	Showing Concern	Empathizer Role**	Showing Concern
		Mentor Role	Developing People***
Innovator Role	Having new ideas	Innovator Role	Initiating significant change***
		Motivator Role**	Inspiring people to exceed expectations
		Visionary Role**	Anticipating customer needs
Broker Role*	Exerting upward influence		
Monitor Role	Insuring accurate work	Monitor Role	Insuring accurate work
Coordinator Role	Maintaining control	Coordinator Role	Maintaining control
Producer Role	Insuring unit performance	Producer Role	Modeling a hard work ethic***
		Driver Role**	Emphasizing speed
		Competitor Role**	Focusing on the competition
Director Role*	Clarifies direction		

Old label dropped; **New label added; *Definition modified*

Note. From "Behavioral complexity in leadership: The psychometric properties of a new instrument," by K.A. Lawrence, R.E. Quinn, and P. Lenk, 2003. Manuscript submitted for publication.

Figure 2. 12 new roles of the modified framework



Note. From "Behavioral complexity in leadership: The psychometric properties of a new instrument,," by K.A. Lawrence, R.E. Quinn, and P. Lenk, 2003. Manuscript submitted for publication.

Table 3. Reliability Coefficients of Behavioral Scales in the Original 72-Item Model

Descriptive Scale Name	Reliability with subordinate ratings	Reliability with self ratings
Relating to People		
Encouraging participation	.83	.69
Communicating concern	.88	
Developing people	.84	.72
Acknowledging personal needs	.80	.68
Building a diverse unit	.79	
Representing employee concerns	.79	
Leading Change		
Anticipating customer needs	.76	.75
Developing a strategic vision	.87	
Initiating significant change	.86	.83
Persisting in the face of adversity	.71	
Convincing senior people to support new ideas	.81	
Inspiring people to exceed expectations	.84	.78
Managing Processes		
Clarifying policies	.87	.86
Expecting accurate work	.86	.80
Providing consistent discipline	.82	
Stabilizing internal processes	.79	
Controlling projects	.84	.86
Making decisions carefully	.75	
Producing Results		
Focusing on competition	.82	.81
Focusing on immediate financial results	.74	
Showing a hard work ethic	.86	.81
Emphasizing speed	.79	.69
Resolving problems quickly	.84	
Running efficient meetings	.93	

Note. From "Behavioral complexity in leadership: The psychometric properties of a new instrument," by K.A. Lawrence, R.E. Quinn, and P. Lenk, 2003. Manuscript submitted for publication.