

Shared leadership: A critical component in IT Project Management

Chet Stagnaro
Freed Associates

Chris Piotrowski
University of West Florida

ABSTRACT

The Information Technology (IT) field continues to evolve at a rapid pace over the past decade, and management has embraced the directives of innovation, cooperative effort, and efficiency as organizational objectives. From a practice perspective, IT project managers have evaluated the distributed leadership style quite favorably in recent years. Furthermore, there is an emerging area of research that reflects interest in the application of the shared leadership model to the everyday functioning of project managers. At the same time, research investigations supporting shared leadership principles have appeared across the broad areas of organizational and work psychology. To date, a systematic review of this diverse body of knowledge has not appeared. To that end, the current article seeks to a) discuss the integrative role of the contemporary IT Project Manager in today's business environment, b) provide a contextual framework of the shared leadership model, c) review empirical studies about the effectiveness of shared leadership principles, d) examine the interface of IT project management and shared leadership, and e) suggest recommendations that may foster the nexus of shared leadership and the project management field.

Keywords: Shared leadership, management, project management, information technology

INTRODUCTION: THE IT PROJECT MANAGER IN TODAY'S BUSINESS WORLD

IT Project Managers are expected to create and manage positive outcomes for their projects. Therefore, the IT Project Manager must plan how project deliverables are organized, and delivered per the scope statement or project charter with the customer. In the realm of IT projects, the IT Project Manager is rarely the technical expert. These projects often require a variety of technologies, and so he or she must lead a team of experts incorporating various technology domains such as hardware, operating systems, networks, databases, web services, information security, and the various business application modules and related business processes. Granted, IT projects are initiated and implemented in response to organizational change initiatives. As responses to strategic initiatives, they typically alter the manner in which a business unit manager, his organization, and the collective organization function (Accenture, January, 2010; Cleland & Ireland, 2007). Therefore, complex cultural challenges arise within the organization requiring project managers to adapt specific leadership functions and skills that enhance the efficacy of overall management.

The IT Project Manager's work responsibilities typically require leading a diverse team of business and IT specialists to design and build a system that re-defines how business processes within a domain (area of processing, e.g., "General Ledger") will supposedly function. The change management aspects of the implementation of this kind of enterprise IT project can be daunting, depending on the size of the project's scope, the target organization and other management factors. Therefore, the IT Project Manager needs to utilize a leadership style that builds collaboration and highly effective sub-teams within the project team as a whole. In this regard, shared leadership is a management style that promotes collaboration and a high level of buy-in from IT project teams since it requires a significant amount of shared decision-making and responsibility for the project's successful outcome.

Johnson, Boucher, Connors, and Robinson (2001) conducted a study about project outcomes and the Project Manager's team leadership effectiveness. They considered the tasking capability (providing direction) and the Project Manager's ability to motivate the team. Furthermore, the project manager should integrate the key stakeholder roles, e.g., the project sponsor, the project team, direct and indirect customers. The Project Manager also selects skills regarding group process as a team-building factor, and establishes a leadership decision-making equilibrium that supports shared leadership. Indeed, these are key shared leadership success factors.

Due to the complexity of an IT project, leadership roles within the project team tend to be based on the delivery of the finished product. These leadership functions need to be integrated within the IT Project Manager role based on the ability to govern the project. Based on the reality of the responsibilities of the IT Project Manager, it would appear that distributive management and leadership approaches would facilitate the functioning of the IT Project Manager in practice, and support a business strategy that recognizes the organizational complexity of IT projects. That is, teamwork is the critical functional medium (*sine qua non*) in IT project environments.

Researchers find that the role of the project manager (leader) can be considered that of the project's "social architect" who develops a climate of active participation. Active participation requires project stakeholders to contribute to the formation, planning and execution of project phases (Norrie & Walker, 2004; Thaimlain, 2004). The leadership notion of project manager as a social architect is considerably different than some of the traditional psychology-

based theories on leadership, particularly with the view of leadership as a form of persuasive force in a group setting. Among the many definitions of leadership, researchers have discussed it as a process of social influence. For example, Bass (1990) viewed leadership as a power function that structured and restructured situations to manage team expectations. Moreover, Bass noted that leadership actively manages social influence wherein one team member affects the motivation of others. As another example of project team social architecting, in a contemporary virtual project teams study by Kai-Tang, Yuan-Ho, Ching-Wen and Cheng (2014), the project manager that used motivating language created a positive team environment, along with the use of team or peer feedback about team member performance. Leadership has often been described as both a process and a dynamic relationship (Barker, 2001) with decision-making power working within the dynamic of the leader-follower (Collinson, 2005).

Spillane (2006) claimed that the issues of leadership and effectiveness should be considered as individual processes; however, leadership should be a direct function of the organization's health. Spillane defined leadership as activities tied to the core work of the organization and designed to influence the organizational members' motivation, knowledge, inspiration, or methods and practices. Therefore, one may conclude from a project management perspective that a fundamental project management skill is to effectively conduct leadership activities to positively influence team members' behavior. Another essential project manager capability is to motivate teams to make decisions and thereby help the teams to understand and drive forward the project's objectives, goals and products (Avolio, Sivasubraminiam, Murray, Jung & Garger, 2003; Norrie & Walker, 2004).

Several researchers (Müller & Turner, 2007; Norrie & Walker, 2004; Thamhain, 2004) have commented that leadership has not been as extensively studied as it has been in general management. Therefore, the theory of leadership within the unique context of IT project management appears to be at a rudimentary level of conceptual understanding. This is based on the fact that, at best, there are provisional explanations as to how and what types of theories of leadership best frame the role of the IT Project Manager.

SHARED LEADERSHIP THEORETICAL FRAMEWORK

A conceptual/theoretical basis for shared leadership has been presented by several scholars (Barker, 2001; DeCarlo, 2004; Fletcher & Kaufer, 2003; Houghton, Neck, & Manz, 2003; Pearce & Conger, 2003), who viewed as a dynamic process leadership behaviors characterized by collaboration, team member peer influence and demonstration of leadership by the group or team as a whole. In a study on project management leadership, Thite (2000) advised that while no single style of leadership was identified as optimal, an underlying flexibility factor was the key issue.

The dimension of shared decision-making power as a shared leadership behavior will be specifically explored in this review. Based on Sanders (2006), it is likewise hypothesized that shared leadership is a social influence process in which individual members lead one another to higher achievement levels. Similarly, Wood and Fields (2007) describe shared leadership as mutually influencing behavior in which leadership activities are dispersed among team members who participate in the decision-making process. Whereas, traditional, hierarchical leadership models specify that decision-making tasks are reserved for those in formal, designated leader roles. Shared leadership offers an inclusive leadership style that supports highly effective teams.

For example, Park and Kwon (2013) viewed self-managed work teams as an important manifestation of shared leadership style.

A critical point to emphasize is that shared decision-making, as an aspect of shared leadership, has particular relevance for IT projects since the project manager is seldom the expert but yet accountable for the outcomes of the project. Thus, based on prior research, it appears that shared decision-making is a prevalent and critical factor in optimal performance on these IT projects. Another aspect of shared decision-making pertains to change management activities necessary to transition the project's deliverables into the organization.

Change management for large projects often requires a team of specialists, particularly for larger implementations where end-users number in the hundreds or more. The main activities involve the planning and execution of specific communication, training and sometimes targeted counseling activities in order to sufficiently prepare the organization for the new system. This may entail contributions from executive sponsors, and corporate communications and human resources specialists all of whom need some level of decision-making authority to provide contributions to the project's change management strategy.

Shared Leadership and General Management

In the general management field, several authors provided empirical data about decision-making and power sharing that promoted organizational improvement and to supported collaboration. Shared decision-making and collaboration are basic attributes of a shared leadership style. Cawthorne (2010) investigated middle management participation in strategic decision-making noting that shared leadership better informed senior managers since middle managers often had more operational and situational data. Cawthorne (2010) also found that shared information as a factor of shared leadership drove overall management effectiveness.

A family-run organizational study presented shared leadership use in family-run organizations. Cater and Justis (2010) investigated shared leadership as a viable alternative to the more traditional leadership model. They found that shared leadership posed problems for these kinds of family organizations, because the family leader would not share decision-making authority. Nonetheless, this study points out that shared leadership is making management inroads even into traditional top-down organizations.

An inclusive, shared decision-making process is an essential shared leadership style attribute. Greer and Van Kleef (2010) studied the effects of power dispersion and power equality with respect to a team's ability to manage conflict resolution. The results showed that power equality facilitated conflict resolution. Similarly, Xue, Bradley, and Liang (2010), in a study of team collaboration and the effect of knowledge sharing on these team dynamics, found that team leader use of team member inputs for decision-making led to higher cooperation. These findings from Greer and Van Kleef and Xue, Bradley and Liang may provide insight into effective project team dynamics.

AN OVERVIEW ON THE APPLICATION OF SHARED LEADERSHIP FOR PROJECT MANAGEMENT

Project Leadership Styles

Recent research on the relationship between types of projects and types of leadership style, has found evidence that different leadership styles are more likely to lead to a successful outcome on different types of projects (Müller & Turner, 2007). Historically, diverse recommendations for the application of Hersey and Blanchard's (1977) situational leadership model on the management of teams and individuals based on the perceived levels of task maturity (willingness to accept responsibility for tasks and being able to work with higher degrees of independence based on competence) have been reported. The situational approach has been advocated for application to Bruce Tuckman's (1965) model for team development dynamics of "forming, storming, norming and performing" stages of the project team (Graham, 1985).

According to Hersey and Blanchard's (1977) model of leadership, there are four situational leadership styles. At the first level, the Structuring Leadership Style is associated with the forming and storming phase; the team needs direct supervision in order to form. The Structuring style (S1) defines work and provides examples for how work should be performed by the leader. The Coaching style (S2) evolves through the life of the project, but is extensively used in the Storming phase, and lightens up in the Norming phase, as the team understands roles and functions with more cohesion. At the next level of leadership style, the Coaching style sets high but realistic goals for performance. The leader provides extensive feedback and personal involvement in order to support the team. At the Performing stage, the next levels of leadership style are applied (the Encouraging and Delegating styles) and delegation of control by the project manager is implemented as a means for continued motivation at the Performing stage. The Encouraging style (S3) recognizes and praises constructive work, is open and supportive by allowing others to structure work. The Delegating style (S4) assigns task responsibility, and fosters motivation by extending control to the team member and expressing respect (Hersey & Blanchard, 1977). Thus, situational leadership asserts a relationship between leadership style and task maturity levels in dyadic and group performance that intuitively may seem true. Although it has received prominence in project management leadership practice, this style is very difficult to apply because of its subjectivity and complexity.

On the other hand, a shared leadership style recognizes the complexity of interdependence and mutual team leader and member influences for the execution of leadership. This is not to say that the project manager has a lesser role in leadership, but rather to posit the project manager's role as a leadership orchestration to mindfully create a collaborative team culture with shared decision-making. The literature provides examples for shared leadership in IT projects.

For example, as an historical precedent of shared leadership in IT literature, Hallows (1998) recommended that the IT Project Manager should promote and include team inputs into project decisions. Furthermore, on any issue, one team member may have more knowledge about important decision-making information than the project manager, and so that person should be recognized to lead or make the decision on behalf of the team. Hallows recognized that in IT projects, there are specialists who should be allowed to exercise direct influence on decision-

making for the benefit of the project due to their expertise in an area relevant to the ultimate, strategic decision.

Harrison (1992) provided a goals context to justify a collaborative, employee oriented leadership style for project managers. Harrison asserted that this project leadership style facilitates goal achievement, and that while participative decision-making may need more time to reach a decision, the project's overall solution implementation will be faster. Dinsmore (1990) showed that a project participative decision-making process contributed to team unity by recognizing and including team members' concerns.

Shared Leadership: An Emergent Leadership Style

Shared leadership is an emerging leadership concept, and is not yet widely recognized in the business world, although it is nonetheless widely practiced in IT projects. Raelin (2005) argued that the process of sharing leadership is the best way to lead an organization in problem-solving management. Other leadership theorists (Barker, 2001; Collinson, 2005; DeCarlo, 2004; Vallaster, 2004) present research findings that tend to support the validity of a shared leadership model, particularly relationship-oriented leadership. Relationship theory in leadership emphasizes the reality of the dynamism of human relationships and their impact on leadership roles and styles.

The professional literature points to an emerging trend in management toward the use of shared leadership, particularly in certain organizational contexts such as senior executive teams (Greenberg-Walt & Robertson, 2001; Pearce, Conger, & Locke, 2007). Researchers cite specific examples of shared leadership styles at the highest management level – the role of the CEO, and especially for the phenomenon of industry and other business alliances or partnerships such as the between Microsoft and Intel. The business vision is created by a shared leadership approach to its definition (Pearce, Conger, & Locke, 2007). Moreover, shared leadership is evident in many areas of an organization, and so from the perspective of general management experience, the phenomenon of shared leadership is becoming a more salient feature in the modern business world. Some researchers have commented that shared leadership should gain in popularity, particularly as organizations become flatter or more matricized (Greenberg & Robertson, 2001).

Other management examples for shared leadership include the organizational practice of creating strategic committees for the definition of programs or projects that carry out strategic objectives. Some researchers suggest this practice is becoming common for politically diverse organizations such as in the context of mergers and acquisitions and large non-profit organizations (Greenberg & Robertson, 2001). Research points to change management and succession planning as other organizational practices in which shared leadership can be more effective than just vertical or top-down management.

For example, Pearce et al. (2007) referred to the work of earlier researchers (i.e., Kotter & Cohen, 2002; Pettigrew, Ferlie, & McKee, 1992) that demonstrated change leadership is more effective when there is the cooperation and participation of middle managers and others across all layers of an organization. With respect to succession planning, Conger et al. 2007 (cited the research of Conger & Kanungo, 1998) that discussed the disadvantages of succession leadership when left to a single senior executive. Specifically, sharing the leadership for succession planning supported a richer, more diverse group of management succession candidates. Thus, Pearce et al. (2007) concluded that shared leadership theory is an attempt to integrate two

important perspectives on leadership theory: the role performed by the individual and leadership as a social process.

Definitions of Shared Leadership

Pearce and Conger (2003) specified shared leadership as “a dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both” (p. 1). These authors noted that the manner in which work is carried-out is shifting to team-based approaches and toward increased areas of specialization among experts. This is a fundamental reason why shared leadership is a management process exquisitely aligned with IT application teams, “the [leader’s] expertise represents only one of the numerous functional specialties at the table... and is therefore highly dependent on the expertise of team members...leadership in these settings is therefore [determined] by an individual’s capacity to influence peers and by leadership needs of the team in a given moment” (p. 2).

Fletcher and Kaufer (2003) described shared leadership as three relational “shifts” from traditional leadership theory that is focused on the individual or individuals at the top of the organization. The first shift is that shared leadership is “distributed and interdependent.” That is, leadership evolves to “a focus on collective achievement, shared responsibility, and the importance of teamwork” (p. 23). The second shift recognizes that shared leadership is embedded in social interaction; that is, shared leadership is a social process that is dynamic, multi-directional, and inclusive. Finally, the third shift is that shared leadership is considered a learning experience. Group or team learning from interactions and shared leadership roles eventually tends to lead to greater shared understanding and positive action. With respect to IT Project Management, ideally the organization experiences relational shifts at each of the three levels. However, the focus of the current research is to examine the manifestation of the first shift, i.e., what is the evidence, in practice, of distributed and interdependent leadership that leads to a focus on teamwork and shared responsibility?

Solansky (2008) argued that shared leadership, rather than sole leadership, delivered an effective, self-managed team process. His research on leadership and education administration proposed that shared leadership in project management likely exists in practice, but perhaps is not a formally recognized leadership concept or phenomenon. Such is likely the case for IT project management. However, researchers have long recognized the complexity of the teams needed to deliver complex projects. Strategies for the development of new expertise, as is the case with enterprise IT projects, require a great deal of learning; in addition, the performance of the activity in the future state (post-implementation) is a function of this learning. Solansky’s research compared and contrasted two leadership styles: shared leadership and single leadership. His findings suggest that teams with shared leadership have motivational and cognitive advantages over teams that take the traditional approach of relying on a single leader. In support of this assertion, Deiss and Soete (1997), claim that shared leadership strongly supports organizational agility and proactive leadership. Shared leadership establishes a culture that is agile and promotes creative and rational thought, and is not completely dependent upon answers to problems being handed down from the top of the hierarchy of power.

Spillane (2006), in his work on distributed leadership, explained that distributed leadership (in effect, the same definition as shared leadership) offers a leadership framework to support the practice application of leadership in the context of specific situations. Spillane’s

book, *Distributed Leadership*, although targeted to leaders in the field of education, provides a general framework for leadership, “distributed leadership takes a stance with respect to what is important in understanding school leadership. However, it does not prescribe what we ought to do in order to practice leadership more effectively...[it] provides a frame that helps [leaders] to interpret and reflect on practice as a basis for rethinking and revisiting [leadership]” (p. 87).

Spillane makes the essential point that distributed leadership anchors reflection on leadership within the actual practice of it, and that this is essential to making improvements because “the distributed perspective shifts the focus from leaders to leadership practice...the distributed perspective offers a particular way of thinking about leadership practice, arguing that practice gets defined in the interaction of leaders, followers, and their situation” (p. 89). Marcellino (2005) similarly found that distribution of leadership supported the development of diverse teams.

Likewise, in a distributed leadership study about its impact on school improvement initiatives, Heck and Hallinger (2010) noted school administrative teams are trending more toward an implementation of a distributed leadership model (Day et al., 2006; Gronn, 2002, 2009; Leithwood et al., 2006, 2009 as quoted by Heck & Hallinger, p. 870), and thus leadership in schools could be conceptualized as team-based (Day et al., 2006; Gronn, 2002, 2009 as quoted by Heck & Hallinger, p. 871). In another study of distributed leadership, Benson and Blackman (2010) identify organizational change management as a driver for the use of a distributed leadership model since it requires collective responsibility and collective flexible to drive change, and its collective organizational buy-in. However, these authors noted that distributed leadership is difficult to achieve and depends on a clear understanding of task and skill-set alignment, and a strong level of trust among the distributed leadership team.

Sanders (2006) defined shared leadership as, “a dynamic, multi-directional, collective activity that is embedded in the social context in which it occurs” (p. 13). It is a process of social influence to collectively attain a directed goal. She examined shared and vertical leadership relationships among New Product Teams – teams charged to develop innovative products (roughly similar to the team mission of the enterprise IT project teams) – to deliver innovative system solutions to the business – both teams deal with innovative solutions. Sanders’ definition is a very salient one and lines up well to the problem of creating effective, high-performing project teams.

The literature provides examples of shared leadership implemented at the highest level within the organization. For example, Ensley, Hmieleski, and Pearce (2006) examined the relationship between vertical (formal leadership, e.g., CEO) and shared leadership from within teams in new ventures. These investigators found that shared leadership is a significant predictor of success in startups. Transformational, transactional, empowering, and directive dimensions of both vertical and shared leadership were the focus of their study. Walt and Robertson (2001) investigated the phenomenon of the “devolving CEO” and defined shared leadership as the highest level of leadership that splits the responsibilities of the CEO between two or more individuals. Bennis and Spreitzer (2001) presented a case study of Unilever Corporation to illustrate a practical application of shared leadership at the top tier of management. Finally, Walt and Robertson (2001) projected that the concept of shared executive leadership would markedly increase in corporate America. Walt and Robertson (2001) cited Peter Drucker’s assertion that the old mode of telling workers what to do will not suffice for knowledge workers (in this case, IT workers), because these employees know more about the job than their managers. Instead, the leader becomes a guide, requesting input and sharing information.

However, from a broader perspective, shared leadership means empowering individuals at all levels and providing them the opportunity to take the lead. Shared leadership is becoming more common as traditional top-down management structure yields to flatter, more decentralized forms, and is seen by some experts as a means to promote agility, pro-activity, and autonomy throughout an organization (Shane & Fields, 2007).

Shared Leadership and Team Effectiveness

Findings from prior research studies indicate that shared leadership supports team effectiveness through team member development and provides a framework for building relationships among team members. For example, in a study on effective virtual project teams, Zigurs (2002) concluded that virtual teams were better enabled with a shared leadership style because it provided a process to support team members' self-leadership and a positive culture for the development of team relationships.

Carson, Tesluk, and Marrone (2007) defined shared leadership as a phenomenon where leadership is distributed throughout the team rather than relying on a single, designated leader. This is in contrast to the concept of vertical leadership that Carson defined as downward leadership from a single leader (interview with Jay B. Carson, podcast, 2008). These authors examined conditions that lead to the development of shared leadership and the influence of shared leadership on team performance. The findings highlighted two issues about shared leadership: (1) the internal team environment, consisting of shared purpose, social support, and voice; and (2) external coaching as predictors of shared leadership emergence.

Carson (2008) suggested that the first feature of the internal team environment should be supported by the organizational culture so as to set expectations that team members function as both followers and leaders. This dynamic establishes the expectation that team members will occasionally need to lead because of the expertise they bring to a specific project role. Carson recommended specialized training to support individuals to learn how to influence (voice) their positions and to communicate directives. Furthermore, Graham (2007) claimed that shared leadership is essential for a high-performing team and suggests "six fundamental elements" for shared leadership principles that can propel a group of individuals toward a higher level of performance and productivity. These are: (1) respect for each individual; (2) trust in each other; (3) common or shared goals; (4) personal accountability for results; (5) effective communication, and (6) discipline to stay the course. The responsibility of the IT Project Manager as guide-leader then is to foster these 6 elements within the team environment and in the decision-making process.

Management experts predict that demands for shared leadership should continue to increase in corporate America. For example, Accenture's (Anonymous, 2010) Global Leader of the Future Profile discussed the importance of two leadership competency dimensions within the organization: 1) development and empowerment of people and teamwork, and 2) development of partnerships and shared leadership as increasing significantly for future leadership. This report also asserted that the knowledge-based organization demands leaders who are ready for the inclusion of workers in decision-making.

In a study about virtual teams, Carte, Chidarbaram, and Becker (2006) addressed the value of shared leadership with respect to the virtual team model. According to these authors, shared leadership behaviors lead to higher team performance. Moreover, Harris (1989) identified 10 group characteristics that must be understood and managed in order to build high-performing

teams: 1) group background, 2) group participation patterns, 3) group communication patterns, 4) group cohesion, 5) group atmosphere, 6) group standards, 7) group procedures, 8) group goals, 9) group leadership, and 10) group alignments. In this regard, shared leadership provides a leadership style that tends to facilitate high team performance. Carte et al. suggested that high-performing, self-managed virtual teams display significantly more leadership behaviors over time. Specifically, these teams display concentrated leadership behavior with a focus on performance (i.e., "Producer" behavior). Moreover, shared leadership behavior tends to track group work (i.e., "Monitor" behavior) in contrast to lower performing teams. This function is important to teamwork since the principle of boundedness is essential to efficacy. Typically, the project team is well-bounded. That is, the membership is clear, and yet not 'over-bounded' in the sense that the team is so rigid that other project stakeholders cannot be brought into the team or be involved directly, if the circumstances warrant (Hackman, 2002).

In a regional business development team study about the use of a shared leadership style, Cox (2009) found that shared leadership contributed to this team's successful goals attainment it required development of strong interpersonal relations, shared decision-making power, and a high level of team self-management. Peer influence supported productivity without the need for a formal organizational leadership figurehead. This study provided a concrete example of robust horizontal influence that is characteristic of a shared leadership process. IT project managers must be able to use horizontal peer influence in their implementation of a shared leadership style.

Wood and Fields (2007) studied shared leadership as a dispersal of decision-making power among all team members and mutual accountability. They found that shared decision-making contributed to team members' accountability because they had some leadership and decision-making associated with their roles in the project team. Furthermore, these authors found that shared leadership is well-suited to organizations that emphasize team work.

Innovation often is a critical success factor in IT projects. Burpitt and Bigoness (1997) evaluated the effect on innovation of team member leadership empowerment. The study included project teams across one U.S. architecture firm's national offices and involved 189 participants. The study identified a clear correlation between empowered project teams and the innovative products they created. Examples of empowerment included providing the team the ability to participate in early project planning, meeting with clients (stakeholders), and freedom to develop problem solutions. Thus, implementation of a shared leadership style in services organizations may be an organizational enabling strategy for innovation.

Small (2009) examined project team shared leadership style on its effect to promote trust. He found that trust is enhanced by a shared leadership style, and that conversely, the existence of trust amplifies the effectiveness of a shared leadership.

Sanders (2006) provided another perspective about individual and group dynamics. Sanders explored shared leadership dynamics in new product teams surveying 520 team members. Sanders' identified a correlation with product development team effectiveness at the individual and group levels and a shared leadership style. Sanders also found that vertical (top-down hierarchical) leadership might be less important to team effectiveness than previously thought, and that team member leadership development improved team effectiveness.

Virtual teams pose a unique and growing phenomenon, familiar to IT Project Managers, which can be viewed as a continuum from no face-to-face interaction to varying degrees of physical collocation. Nauman, Kahn, & Ehsan (2010) evaluated the phenomenon of empowerment and how this dynamic affects virtual teams and leadership style. Based on their findings, shared leadership appears to be particularly effective in leading self-managed, virtual

team, since team leaders must distribute and delegate leadership functions and responsibilities to team members (Bell & Kozlowski, 2002 as quoted by Nauman, Kahn, & Ehsan, 2010, p. 641).

The process of IT Project Managers leading teams of knowledge workers with high areas of specialization not only requires that they coach team members on how to lead, but also on how to constructively exert influence that is strategic in the delivery of the overall project. Sanders (2006) discussed the importance of distributed or peer influence among the project team as an element in her proposed theoretical framework for shared leadership.

Lord and Maher (1991) in their study on dyadic relationships (i.e., the leader-subordinate relationship), concluded that the perception of the relationship has significant consequences on organizational outcomes. Thus, the perception of the quality of dyadic relationships is critical in management. Also, where the IT Project Manager is interfacing on at least a weekly if not daily basis with their team, the critical importance of the dyadic leader-subordinate relationship cannot be underestimated. For example, the leader-subordinate interaction tends to be multi-dimensional in terms of the dynamics of reciprocal influence processes. The shared leadership process has the potential to positively direct the natural dynamics of mutual influence by providing team members with a voice in how the project's products and processes are created.

Finally, Hunt (1991) also discussed the dominance of direct influence, face-to-face interaction within lower-level leadership settings. These functions are similar to the dynamics of the project team rather than a leadership context at a higher level, where influence would need to be directed across multiple organizational layers. Moreover, the notion of shared leadership wherein the leader and subordinates directly influence each other is a key component to understanding how responsibility (that is, shared decision-making) is transacted. More importantly, the dynamic framework of shared leadership complements the unique milieu of the IT business setting.

Hitt (1988) characterized the productive team as one whose behavior exhibits support for decisions made. Members had an opportunity to weigh-in on the decision, and even if their opinion was not acted upon, they still support the decision since they had a right for input. The behavior exerts influence on the rest of the team to adopt and support the decision taken. The application of shared management as a collaborative process of group interaction underscores the necessity to provide opportunities for decision-making in order to enhance productive team behaviors. To further illustrate the point that shared leadership requires shared decision-making, Hitt advocated for the involvement of team members in key decisions that affect them-- provide participants a range of decision-making authority; consult - choose an alternative, construct the alternatives and make the decision. Also, involve team members in the review of progress and corrective action decisions, and then involve them in creating the team culture – or creation of a team-building program. Hitt's emphasis on shared power and the provision of a voice to team members underscores the value of shared leadership practice.

Wang, Waldman and Zhang (2013) in their shared leadership study concluded that the shared leadership benefits are stronger as the work of team members becomes more complex. This conclusion appears to support the efficacy of shared leadership style for IT project management.

Is Gender a Factor in Project Leadership?

Thomas and Buckle-Henning (2007), examined the affect of gender in project management practice. They evaluated the language of the Project Management Institute's Body

of Knowledge, the project management professional standard, and found that while the standard does have a masculine cognitive style, the project managers of both genders were equally skilled at balancing male and female cognitive styles. They asserted that masculine and feminine cognitive project management styles should be recognized as another dimension to leadership style. In addition, collaboration and cognizance of evolving project needs are required to meet stakeholder expectations and address project risks. Collaboration skills are associated with a feminine cognitive style, and thus is an example of the need for both genders to be competent at feminine cognitive leadership styles, and not just the masculine styles that are associated with tasking and control.

Other researchers have offered a conceptual framework for the importance of feminine cognitive processes in people management in business (Foreman & O'Brien, 2000; Klenke, 2003; Voelke, 2003). There is additional evidence in the literature that collaborative cognitive attributes, traditionally "feminine," are skills also acquired by men (Kelan, 2008). Based on these formulations, shared leadership, as a collaborative leadership model, may be a "feminine" cognitive leadership style that both genders are equally capable of implementing.

RESEARCH IMPLICATIONS FOR IT PROJECT MANAGEMENT

Recent research by Hargis, Watt, and Piotrowski (2011) on leadership has indicated that management style needed to account for the type of business context where managers functioned. Implications for the IT field seem quite notable. First and foremost, shared leadership strategies are widely used, although the benefits of shared leadership as such may not be well-recognized by IT Project Managers or senior management stakeholders.

This is not surprising, as the literature has suggested that shared leadership principles are still emerging into the mainstream business management discourse. The IT project teams, which serve an adjunctive function, have a top leader, the project manager, and the team. These teams typically include sub-team leader roles. For example, a development team leader that manages a sub-team of developers.

Recommendations for Shared Leadership in Project Management

Several recommendations to foster the management capabilities and leadership efficacy of project managers are noted below:

- Project managers, as the "Top Leader" of the IT project team should continue to enable shared leadership structures in order to maximize team effectiveness. Therefore, a recommendation for practice would be for the project manager to develop the project's Human Resources (HR) Plan such that the shared leadership strategy is evident to both management and subordinates. For example, within the Project HR Plan, the project manager documents how shared leadership is implemented in the project team's organization chart, team role descriptions and the team roles' deliverables. For example, the HR Plan might address key questions, such as:
 - How does shared leadership complement the project manager's vertical leadership dynamic? What deliverables are shared and not shared between the project manager and team members, and why?
 - What are the general expectations for leading the team for a given role and its intended deliverables? What leadership behaviors would be encouraged?

- How would the team members prepare themselves to lead on projects?
- How would shared leadership be measured, evaluated, and rewarded?
- How would shared leadership characteristics be formulated with regard to the project's success criteria or outcome?
- **Expand Project Manager Coaching Activities.** Project managers should continue to exercise and expand upon coaching activities to support Team Lead and Team members' leadership capability, and also actively integrate with the project sponsor leadership strategy. As discussed earlier, organizations increasingly rely upon project teams to deliver organizational initiatives and, thus, organizational structures are increasingly team-based. Project sponsors can benefit by working with the project manager to prepare teams to implement shared leadership strategies within active projects. In this regard, Carson, Tesluk, and Marrone (2007) identified coaching activities that seem to enhance the effectiveness of shared leadership among teams:
 - Supportive coaching by a team manager fosters self-management by team members. For example, the project manager provides encouragement, motivation, reinforcement, and ultimately rewards to team members who demonstrate high levels of proficiency, responsibility, and group morale
 - Leverage peer influence to support effective shared leadership and minimize "free riding" by providing teams with guidance on task strategies and alignment with deliverables and quality requirements
- **Create Supportive Organizational Change Management Strategies for Shared Leadership.** The current research identified that while there are high levels of usage of shared leadership strategies among IT Project Managers, shared leadership per se may not be formally recognized within the broader organizational context. Thus, the integration and implementation of shared leadership may require some degree of training and support by senior-level management in order to encourage acceptance of this leadership style for all major IT projects.

As an important change management activity in support of shared leadership implementation, IT Project Managers should seek out the support and guidance of the project sponsor and the organization's Human Resources director in order to identify and implement 'compensation' and other strategies that would support shared leadership behaviors among project team members. In this regard, Cohen (2005) emphasized the need to establish adequate levels of senior management support and vision, and to reinforce the change through quick wins and other rewards.

Recommendations for Future Research

Based on the body of knowledge that forms the nexus of between project management and leadership styles, the current research instills an emergent awareness of the value of shared leadership principles in fostering team effectiveness, product innovation, and organizational change in emergent companies. This has particular relevance to enterprise IT projects since the nature of such an undertaking obviously is team-based, and the scope of these projects by definition impacts innovative changes for the modern organization. Therefore, further research on the relationship of shared leadership with these organizational operations should further explore and enrich this emergent awareness in the project management profession. Specifically:

- Further research on the relationship of shared leadership and enterprise IT project success would improve understanding for how a shared leadership strategy might specifically support the attainment of project key success, and identify limits and the types of IT projects that are best supported by this innovative leadership style
- Additionally, a longitudinal study regarding the relationship of shared leadership style in enterprise project success should be undertaken to better understand the long-term effectiveness of this leadership style and the ability of IT projects to successfully deliver important organizational change. In this regard, long-term outcome studies in the area of ‘virtual’ teams have been reported (Carte, Chidambaram, & Becker, 2006; Heck & Hallinger, 2010)
- With respect to shared leadership team models, exploratory research on Locke’s (2003) proposal for an “integrated shared leadership model” may provide organizational development insight into how best to structure an enterprise IT project team in order to maximize the benefits of shared leadership. Locke’s integrated shared leadership model seems to align well with IT project team as discussed in the current research, wherein the project manager embraces subordinate Team Lead roles and direct reporting from other team members. The goal of such research would be to explore and clarify the dynamics between vertical and horizontal leadership within IT project teams, and also could include an analysis on the influence of team-external senior manager project stakeholders, such as the project sponsor
- Further investigation into the prevalence of project manager coaching and its relationship to shared leadership efficacy may be particularly instructive for the professional leadership education of project managers; such findings would provide insight into how to create highly functional project teams
- Similarly, additional study on the effectiveness of an external team coach role to support project team members’ participation in shared leadership might be undertaken as a means to formulate team member shared leadership training strategies. This type of study would explore the prevalence and implementation of the external coach coaching role as an addition to or in lieu of mentoring by the project manager. Such research may be particularly useful to virtual and agile project teams since these teams require a high degree of team member self-leadership
- Finally, more study is needed to understand the relationship between shared leadership and team dynamics in the context of conflict resolution and team decision-making. These findings may provide critical insights with respect to building the team’s capacity to perform at an optimal level, and thus to create a functional organizational methodology for innovative team-building.

CONCLUSIONS

Some of our general conclusions and recommendations regarding SL in project management have found support in the recent research literature. For example, the need for project manager performance assessment and leadership training (Nixon & Harrington, 2012), and open communications especially ambiguity acceptance among project leaders and customers (Hagen & Park, 2013). Other authors (Lundy & Morin, 2013; de Oliveira, Valentina, & Possamai, 2012) laud the implementation of shared decision-making among the project team principles (and SL principle) to improve the likelihood for success on organizational

effectiveness and employee morale. Moreover, several researchers (Anantatmula, 2010; Clark, 2012; Omorede, Thorgren, & Wincent, 2013; Thamain, 2013; Tuuli, Rowlinson, Fellows, & Liu, 2012) found empirical support for a flexible, shared leadership style that engenders project manager and team collaboration, and project team adaptability to address a number of project needs (i.e., resiliency toward changing goals, team motivation, and risk management contingency identification).

In addition, the current review offers several insights that may be applied to general, small business and corporate settings. That is, shared leadership principles appear to support the empowerment of employees and project team motivation and cooperation. Due to a positive organizational climate, employees' attitudes and job performance remain at an optimal level. Moreover, research from the field clearly shows that when both all organizational levels are asked to contribute to project deliverables and are accountable for project outcomes that the organizational creativity is improved (Kouzes & Posner, 2002). Similarly, team cohesiveness supports individual self-esteem, and mutual team member trust and respect (Lin, Baruch, & Shih, 2012; Nelson & Quick, 2003, pp. 299-302). Furthermore, the shared leadership model appears to mitigate team member feelings of isolation, apprehension. These are dysfunctional team member perceptions that contribute to counterproductive behavior in IT projects.

In conclusion, shared leadership is a management style that most IT Project Managers seem to implement in their project activities, behaviors, and overall functioning. Other research seems to support the use of shared management in project teams with respect to driving more accountability from team members, building team relationships, making better quality decisions, and to some extent, supporting organizational innovation and change management (Wood & Field, 2007; Xue, Bradley, & Liang, 2010; Zigurs, 2002).

REFERENCES

- Anantatmula, V. (2010). Project management leadership role in improving project performance. *Engineering Management Journal*, 22(1), 13-22.
- Anonymous. Enterprise resource planning. Retrieved December 10, 2009 from <http://www.tech-faq.com/enterprise-resource-planning-erp.shtml>
- Anonymous. Global leader of the future profile. Retrieved January 2010 from Accenture.com
- Avolio, B. J., Sivasubraminiam, N., Murry, W. D., Jung D., & Garger, J.W. (2003). Assessing shared leadership: Development and preliminary validation of a team multifactor leadership questionnaire. In C.L. Pearce & J.A. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 143- 172). Thousand Oaks, CA: Sage.
- Barker, R. (2001). The nature of leadership. *Human Relations*, 54(4), 469-494.
- Bass, B. (1990). *Bass & Stodgill's handbook of leadership: Theory, research, and managerial applications*. New York, NY: Free Press.
- Benson, A., & Blackman, D. (2010, April). To distribute leadership or not? A lesson from the islands. *Tourism Management*, 1-9.

- Bligh, M. C., Pearce, C. L., & Kohles, J. C. (2006). The importance of self- and shared leadership in team-based knowledge work. *Journal of Managerial Psychology*, 21(4), 296-318.
- Bohlen, G., Lee, D., & Sweeney, P. (1998). Why and how project managers attempt to influence their team members. *Engineering Management Journal*, (10)4, 21-28.
- Buckle, P., & Thomas J. (2003). Deconstructing project management: A gender analysis of project management guidelines. *International Journal of Project Management*, 21, 433-441.
- Burpitt, W., & Bigoness, W. (1997). Leadership and innovation among teams: The impact of empowerment. *Small Group Research*, 28(3), 414-423.
- Carson, J. (2008). Shared leadership: An interview with Jay B. Carson. Retrieved September 1, 2009, from <http://www.obweb.org/modules.php?op=modload&name=News&file=article&sid=123> posted Tuesday, January 29, 2008.
- Carson, J., Tesluck, P., & Marrone J. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal*, 50(5), 1217-1234.
- Carte, T.A., Chidambaram, L., & Becker, A. (2006). Emergent leadership in self-managed virtual teams: A longitudinal study of concentrated and shared leadership behaviors. *Group Decision and Negotiation*, 15(4), 323-343.
- Cater, J., & Justis, R. (2010). The development and implementation of shared leadership in multi-generational family firms. *Management Research Review*, 33(6), 563-588.
- Cawthorne, J. (2010). Leading from the middle of the organization: An examination of shared leadership in academic libraries. *The Journal of Academic Librarianship*, 36(2), 151-157.
- Cleland, D., & Ireland, L. (2007). *Project management: Strategic design and implementation* (5th ed.). New York, NY: McGraw-Hill.
- Cohen, D. (2005). *The heart of change field guide: Tools and tactics for leading change in your organization*. Boston, MA: Harvard Business School Press.
- Collinson, D. (2005). Dialectics of leadership. *Human Relations*, 58(11), 1419-1442.
- Cox, J. D. (2009). Leadership without a leader: An exploratory study of collaborative leadership. *Dissertation Abstracts*, Ann Arbor, MI: ProQuest UMI Dissertation Services, (UMI No. 305159331).

DeCarlo, D. (2004). *Extreme project management: Using leadership, principles, and tools to deliver value in the face of volatility*. San Francisco, CA: Jossey-Bass.

Deiss, K., & Soete, G. (1997, December). Developing shared leadership: A note for the new year." *ARL Newsletter*, pp. 7-9.

Denzin, N., & Lincoln, Y. (1994). Introduction: Entering the field of qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. 1-3, 2nd ed.). Thousand Oaks, CA: Sage.

De Oliveira, M., Valentina, L., & Possamai, O. (2012). *International Journal of Productivity and Performance Management*, 61(6), 653-671.

Dinsmore, P. (1990). *Human factors in project management*. New York, NY: American Management Association.

Edmondson, A., & McManus, S. (2007). Methodological fit in management field research. *Academy of Management Review*, 32(4), 1155- 1179.

Ensley M., Hmieleski K., & Pearce, C. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *Leadership Quarterly*, 17(3), 217-231.

Fletcher, J., & Kaufer K. (2003). Shared leadership: Paradox and possibility. In C. Pearce & J. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 21-42). Thousand Oaks, CA: Sage.

Foreman, J., & O'Brien, F. (2000). Gender restructuring and management in the UK: Project management and human resources management influx. *Management Research News*, 23, 9-11.

Graham, R. (1985). The role of network techniques in team-building for project management. In B. Dean (Ed.), *Project management: Methods and studies* (pp. 163-170). Amsterdam: Elsevier Science Publishers.

Graham, V. (2007a). Shared leadership. *SuperVision*, 68(9), 3-4.

Graham, V. (2007b). The six-step plan for shared leadership. *Club Management*, February, 24-25.

Greenberg-Walt, C., & Robertson, A. (2001). The evolving role of executive leadership. In W. Bennis, G. Spreitzer, & T. Cummings (Eds.), *The future of leadership: Today's top leadership thinkers speak to tomorrow's leaders* (pp. 139-157). San Francisco, CA: Jossey-Bass.

- Greer, L., & Van Kleef, A. (2010). Equality versus differentiation: The effects of power dispersion on group interaction. *Journal of Applied Psychology*, 95(6), 1032-1044.
- Hackman, R. (2002). *Leading teams: Setting the stage for great performance*. Boston: Harvard Business School Press.
- Hagen, M. & Park, S. (2013). Ambiguity acceptance as a function of project management: A new critical success factor. *Project Management Journal*, 44(2), 52-66.
- Hallows, J. (1998). *Information systems projects: How to deliver function and value in information technology projects*. New York, NY: American Management Association.
- Hargis, M.B., Watt, J.D., & Piotrowski, C. (2011). Developing leaders: Examining the role of transactional and transformational leadership across business contexts. *Organization Development Journal*, 29(3), 51-66.
- Harrison, F. L. (1992). *Advanced project management: A structured approach* (3rd ed.). New York, NY: Halsted Press.
- Heck R., & Hallinger, P. (2010). Testing a longitudinal model of distributed leadership effects on school improvement. *The Leadership Quarterly*, 21, 867-885.
- Hersey, P., & Blanchard, K. (1977). *Management of organizational behavior* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Hitt, W. (1988). *The leader-manager: Guidelines for action*. Columbus, OH: Batelle Press.
- Houghton, J., Neck, C., & Manz, C. (2003). Self-leadership and super-leadership: The heart and art of creating shared leadership in teams. In C. Pearce & J. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 123-135). Thousand Oaks, CA: Sage.
- Hunt, J. (1991). *Leadership: A new synthesis*. Newbury Park, CA: Sage.
- Johnson, J., Boucher, K., Connors, K., & Robinson, J. (2001). Collaborating on project success. Retrieved December 21, 2007 from <http://www.softwagemag.com/archive/2001feb/CollaborativeMgt.html>
- Kai-Tang, Fan, Yuan-Ho, Chen, Ching-Wen, Wang, Chen, Minder. (2014). E-leadership effectiveness in virtual teams: motivating language perspective. *Industrial Management and Data Systems* 114(3), 421-437.
- Kelan, E. K. (2008). The discursive construction of gender in contemporary management literature. *Journal of Business Ethics*, 81(2), 427-445.

- Klenke, K. (2008). *Qualitative research in the study of leadership*. Bingley, UK: Emerald Group Publishing, Ltd.
- Klenke, K. (2003). Gender influences in decision-making processes in top management teams. *Management Decision*, 41(10), 1024-1034.
- Kouzes, J.M., & Posner, B. (2002). *The leadership challenge* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Lin, C., Baruch, Y., & Shih, W. (2012). Corporate social responsibility and team performance: The mediating role of team efficacy and team self-esteem. *Journal of Business Ethics*, 108, 167-180.
- Locke, E. (2003). Leadership: Starting at the top. In C. Pearce & J. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp.271-283). Thousand Oaks, CA: Sage.
- Lord, R., & Maher, K. (1991). *Leadership and information processing: Linking perceptions and performance*. Boston, MA: Unman Hyman.
- Lundy, V., & Morin, P. (2013). Project leadership influences resistance to change: The case of the Canadian public service. *Project Management Journal*, 44(4), 45-64.
- Marcellino, P. (2005). Bridging disciplines and setting up diverse teams. *Journal of Behavioral and Applied Management*, 6(3), 189-210.
- Müller, R., & Turner, R. (2007). Matching the project manager's leadership style to project type. *International Journal of Project Management*, 25(1), 21-31.
- Nauman, S. Khan, A., & Ehsan, N. (2010). Patterns of empowerment and leadership style in project environment. *International Journal of Project Management*, 28, 638-649.
- Nelson, D.L., & Quick, J.C. (2003). *Organizational behavior* (4th ed.). Mason, OH: Thomson.
- Nixon, P., & Harrington, M. (2012). Leadership is significant to project success or failure: A critical analysis. *International Journal of Productivity and Performance Management*, 61(2), 204-216.
- Norrie, J., & Walker, D. (2004). A balanced scorecard approach to project management leadership. *The Project Management Journal*, 35(4), 49-58.
- Omoredede, A., Thorgren, S., & Wincent, J. (2013). Obsessive passion, competence, and performance in a project management context. *International Journal of Project Management*, 31(6), 877-888.

- Park, Jong Gyu, & Kwon, Bora. (2013). Literature review on shared leadership in teams. *Journal of Leadership, Accountability and Ethics* 10(3), 28-36.
- Pearce, C., & Conger, J. (2003). All those years ago: The historical underpinnings of shared leadership. In C. Pearce & J. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp.1-13). Thousand Oaks, CA: Sage.
- Pearce, C., Conger, J., Locke, E. (2007). Theoretical and practitioner letters: Shared leadership theory. *The Leadership Quarterly* 18, 281-288.
- Raelin, J. (2005). We the leaders: In order to form a leaderful organization. *Journal of Leadership & Organizational Studies*, 12(2), 18-30.
- Sanders, T. (2006). Collectivity and influence: The nature of shared leadership and its relationship with team learning orientation, vertical leadership and TEA. *Dissertation Abstracts*, Ann Arbor, MI: ProQuest UMI Dissertation Services, (UMI No. 3237041).
- Shane, M.W., & Fields, D. (2007). Exploring the impact of shared leadership on management team member job outcomes. *Baltic Journal of Management*, 2(3), 251-262.
- Small, E. E. (2007). *Shared leadership: A social network analysis*. The University of Tennessee. *ProQuest Dissertations and Theses*, n/a. Retrieved from <http://search.proquest.com/docview/304830042?accountid=26967>. (304830042).
- Smith, H.F., Thompson, R., & Iacovou, C. (2009). The impact of ethical climate on project status reporting. *Journal of Business Ethics*, 90, 577-591.
- Solansky, S. (2008). Leadership style and team processes in self-managed teams. *Journal of Leadership & Organizational Studies*, 14(4), 332-342.
- Spillane, J. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass.
- Thamhain, H. J. (2004). Team leadership: Effectiveness in technology-based project environments. *Project Management Journal*, 35(4), 37-48.
- Thamhain, H. (2013). Managing risks in complex projects. *Project Management Journal*, 44(2), 20-35.
- Thite, M. (2000). Leadership styles in information technology projects. *International Journal of Project Management*, 18(4), 235-241.
- Thomas, J., & Buckle-Henning, P. (2007). Dancing in the white spaces: Exploring gender assumptions in successful project managers' discourse about their work. *International Journal of Project Management*, 25, 552-559.

- Tuckman, B. (1965). Developmental sequence in small groups. *Psychological Bulletin* 63(6), 384 - 399.
- Turner, R., & Müller, R. (2005). The project manager's leadership style as a success factor on projects: A literature review. *The Project Management Journal*, 36(2), 51-63.
- Tuuli, M., Rowlinson, S., & Liu, A. (2012). Empowering the project team: Impact of leadership style and team context. *Team Performance Management*, 18(¾), 149-175.
- Vallaster, C. (2004). Shared leadership: Reframing the hows and whys of leadership. *Leadership & Organization Development Journal*, 25(1/2), 111-113.
- Voelcke, J. (2003). Directive and connective: Gender-based differences in the management styles of academic library managers. *Johns Hopkins University Press Portal : Libraries and the Academy*, 3(3), 393-418.
- Wang, D., Waldman, D., Zhang, Z. (2014). A Meta-analysis of shared leadership and team effectiveness. *Journal of Applied Psychology*, 99(2), 181-198.
- Wood, M., & Fields, D. (2007). Exploring the impact of shared leadership on management team member job outcomes. *Baltic Journal of Management*, 2(3), 251-272.
- Xue, Y., Bradley, J., & Liang, H. (2011). Team climate, empowering leadership and knowledge sharing. *Journal of Knowledge Management*, 15(2), 299-312.
- Zigurs, I. (2002). Leadership in virtual teams: Oxymoron or opportunity? *Organizational Dynamics*, 31(4), 339-351.