EMERGENT LEADERSHIP IN VIRTUAL WORK TEAMS

A Thesis

Presented to the Faculty in Communication and Leadership Studies

School of Professional Studies

Gonzaga University

Under the Supervision of Dr. Alexa Dare

Under the Mentorship of Dr. Michael Poutiatine

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts in Communication and Leadership Studies

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November 2011
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Abstract

This dual method (quantitative and qualitative) study sought to discover the perceptions of leadership in virtual work teams. The ability to communicate among team members, in this environment, becomes increasingly difficult. Specifically, this study analyzed emergent leadership characteristics, as identified by participants, in a virtual work environment. The philosophical framework for this study is based on Boster’s (2006) concept “communication results in social influence.” This study is grounded in the theoretical work of Walther’s (1992) Social Information Processing CMC model, and Graen and Uhl-Bien’s (1995) relationship-based LMX model. The data obtained for this study was achieved through a survey of closed and opened-ended questions and subsequent open-ended interview questions. The results of this study indicate the existence of emergent leadership in virtual work teams when there is a lack of formal leadership assignment. Furthermore, the results indicate that a combination of leadership characteristics allow team members to identify one individual as an emergent leader. These findings further the study of communication because it provides a basis for overcoming CMC complexities through the display of specific leadership characteristics.
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CHAPTER 1: INTRODUCTION

Over the past two and a half decades, introducing and evolving virtual teams has become increasingly important for companies to remain competitive. In addition, advances in computer mediated communication and technology have enabled rapid organizational change, thus creating increasingly more complex and dynamic jobs (Bell & Kozlowski, 2002). In an effort to remain competitive and evolve as the economy necessitates, many companies have created virtual teams that span time zones and continents in an effort to access the most qualified individuals for the job. For example, PricewaterhouseCoopers, with thousands of employees across hundreds of countries, uses virtual teams to bring cross-functional employees together to complete a specific project. Similarly, Whirlpool Corporation has used virtual teams composed of experts from several countries to complete long-term projects (Bell & Kozlowski, 2002).

As the use of virtual work teams is a fairly new research focus in communication studies, the literature is limited, but evolving and timely. The virtual team dynamic, specifically the leadership dynamic, has been studied most frequently over the past twenty years. Researchers such as Avolio, Kahai, and Dodge (2001); Avolio, Walumbuya, and Weber (2009); Bader and Zaccaro (2003); Bell and Kozlowski (2002); and Dannenhoffer, Davidson, Gay, and Rice (2007) have studied leadership behaviors and best practices in a virtual environment. These studies established numerous behaviors and best practices for the virtual environment to be utilized by academics and employers. Furthermore, several researchers including Carson, Tesluk, and Marrone (2007); Carte, Chidambaram, and Becker (2006); Kickul and Neuman (2000); and Tyran, Tyran, and Shepherd (2003) chose to analyze different leadership styles discovered in virtual teams. These studies allowed scholars to understand that there can be multiple leadership behaviors displayed in a virtual environment, and depending on the communication between and
among team member’s, perceptions of leadership can change. These studies have established interest in the areas of computer mediated communication (CMC), behavioral science, sociology, communication studies, leadership studies, and health care studies.

CMC has often been studied in comparison to face to face teams, specifically the complexity of establishing relationships among team members in a diminished communication environment. Therefore, this study sets out to understand those complexities and identify how team members are able to overcome them through communication. Few prior studies have focused solely on virtual teams in a workplace setting; therefore, this study will be exclusive to those types of teams. This study will further the understanding of leadership in a virtual workplace while adding to CMC and leadership studies.

**Importance of the Study**

A search in Google Scholar on November 20, 2011, with the term “virtual work teams” returned 265,000 results, a search of “leadership in virtual teams” returned 86,300 results, and a search of “emergent leadership in virtual teams” returned 29,800 results. These searches indicate the relevance of studying virtual work teams. Additionally, the results indicate that research and information available on the topic, while significant, is in its initial stages. In comparison, a Google Scholar search on the term “face to face work teams” brought back 831,000 results and a search on the term “leadership in face to face work teams” returned 320,000 results. Therefore, studying leadership in virtual teams will provide a holistic view of the expanding use of the word “team” in the workplace.

Since this is one of the first studies dealing specifically with emergent leadership in the virtual workplace, it is plausible to assume that employers are not aware of the best leadership
dynamic for their virtual work teams. While some virtual work teams expire after a specific length of time, others exist for years. Regardless of length of time, the leadership dynamic can have a significant influence on how and if the team will succeed. The leadership dynamic can also greatly affect how the remaining team members will communicate and interact within the group. This study will deal specifically with the perceptions of leadership as identified by team members; including how and why a certain individual was perceived as the team’s leader.

**Definitions of Terms Used**

Virtual Work Team- a team of geographically dispersed people with a common goal to carry out interdependent tasks using mostly technology for communication (Bosch-Sijtesma, 2007)

Hybrid Team- this type of team is made up of individuals in both a virtual setting and those located in the same office

Face to Face (FTF) Team- refers to communication taking place between individuals (team members) in the same physical location throughout the duration of project task

Computer Mediated Communication (CMC) - refers to communication taking place between individuals (team members) not in the same location, using communication technology (phone, e-mail, etc) to complete the project task

E-Leadership- “a social influence process mediated by advanced information technology to produce a change in attitudes, feelings, thinking, behavior, and/or performance with individuals, groups, and/or organizations” (Avolio, Kahai, and Dodge, 2001, p. 617)

Shared Leadership- defined by several researchers (Bathazard, Waldman, Howell, & Atwater et al, 2004; Carson, Tesluk, & Marrone, 2007; Huang, Kahai, & Jestice, 2010; Shuffler, Wiese,
Salas, & Burke, 2010), and they commonly agree shared leadership refers to a team whose members agree to distribute the leadership responsibilities across group members allowing mutual influence among all members.

Emergent Leadership- informal leadership as it is not predetermined by outside management, or formally established by the team. Rather, emergent leaders are identified by team members as the team leader throughout the project task (George & Sleeth, 2000).

**Organization of Remaining Chapters**

This study is organized into five chapters, the first chapter above. Chapter two includes a review of literature related to philosophical and theoretical concepts, and the research related to the complexities of communication and leadership in a virtual workplace. Next, chapter three includes the scope and methodology for the survey and interview studies used, as well as reasoning for these methods. Chapter four analyzes and discusses the results of this study in the form of themes and discussions. The final chapter (five) includes the conclusions of this study as it relates to previous studies, a limitations section, and recommendations for future research.
CHAPTER 2: LITERATURE REVIEW

A virtual work team can be defined in several ways; the most common is a team of geographically dispersed people with a common goal to carry out interdependent tasks using mostly technology for communication (Bosch-Sijtesma, 2007). Comparatively, hybrid teams are made up of individuals in both a virtual setting and those located in the same office. Virtual and hybrid teams have been studied in several arenas through qualitative and quantitative studies as well as literature reviews; many of which have concentrated on the technology, dispersion, individual and team expectations, as well as best practices (Bader & Zacarro, 2003; Bathazard, and Waldman, Howell, & Atwater, 2004, Ruggeri, 2009; and DeRosa, 2009). Leadership in virtual teams has been reviewed more recently and mostly in comparison to leadership in traditional or face-to-face teams, or broadly comparing leadership behaviors (Furst, Reeves, Rosen, & Blackburn, 2004; Kayworth & Leidner, 2002; and Kerfoot, 2010). The following literature review will begin with the philosophical assumptions that provide reason for this research, followed by application of communication and leadership theory to the virtual team setting. Furthermore, the literature review will provide a brief overview of face-to-face versus virtual team characteristics, technology and its effects on e-leadership, and finally an in depth discussion on the effectiveness of virtual team leadership behaviors.

Philosophical Assumptions

People are constantly communicating, traditionally in verbal and non-verbal channels. As society continues to move towards a virtual environment, in social and career interactions, constant communication takes the form of text (versus handwriting), interpretation (versus voice tone/inflection), and written word (versus spoken). In Boster’s essay titled, Communication as
Social Influence, he states, “all messages exert social influence,” and “all communication results in social influence” (Boster, 2006). On a daily basis, every person has an impact, big or small, on someone through the messages they send and the results that message brings. Our daily communication can be analyzed in the context of social influence, whether it is for a social exchange or not. Therefore, it is of the upmost importance we evaluate the effects our communication has on the communities in which we live. For many people, most of their time is spent in a workplace community, whether it is considered functional or dysfunctional. Within this community, individuals are provided an opportunity to make an impact on their peers, managers, direct reports, and team members. Specifically, group leaders have a unique opportunity to influence the group dynamic and communication opportunities.

This study assumes that social influence transcends to workplace teams and is important to the development of leadership through various communication channels. Psychologist’s Hovland, Janis, and Kelley (1953) contributed significantly to the concept of communication as social influence through their Yale Attitude Studies. For example, Hovland established a link between communication stimuli, audience predisposition, and opinion change (Hovland et al., 1953). Additionally, the virtual platform provides opportunities for different, and often more complex, ways to communicate with team members. This research strives to provide a deeper look at how leadership can occur in a virtual work environment through team formation and communication/leadership style despite the unavoidable challenges. The ability to understand and improve leadership selection will contribute to the overall team success.
Theoretical Application

**Leader Member Exchange Theory.**

Outside of, and with regard to, the upcoming literature on emergent leadership in virtual teams, the following communication and leadership theories will be utilized to understand leadership dynamic among teams. First, Leader-Member Exchange Theory (LMX) (Dansereau, Graen, & Haga, 1975) will provide discussion on the relationship between leader and follower, serving as a basis for understanding the necessary relationship among team members for a leader to emerge. The LMX model was originally developed by Dansereau, Graen, & Haga (1975) and initially termed Vertical Dyad Linkage (VDL) (Schriesheim, Castro, & Cogliser, 1999). Over the next several decades, theorists and researchers developed and refined versions of LMX based on leadership qualities and forming partnerships between leaders and followers (Graen, Novak, & Sommerkamp, 1982; Scandura, Graen, & Novak, 1986; Graen & Uhl-Bien, 1995). Graen and Uhl-Bien (1995) merged the LMX model with relationship-based theory in an attempt to understand what leadership is and how it is achieved. The LMX model of leadership is transactional in nature. Burns (1978) states a transactional leader is interested in looking out for oneself and therefore the transaction between leader and subordinate must be an exchange of benefits for both parties, most specifically the leader. In contrast, a transformational leader would encourage exchanges between both parties because it is the morally right thing to do for the developing individual (Bass, 1985). The LMX model is relevant to this study of virtual work teams because emergent leaders establish relationships with other group members for the benefit of themselves and the team, not because it will advance the other team members or the morally right thing to do.
In the relationship-based approach, one can focus on relationship from the level of the group; which is necessary in this study of emergent leadership because the group will solidify the individual’s status as group leader. The main focus of the relationship-based LMX model is the leader must form differentiated relationships with each team member to create “high-quality exchanges” with mutual trust, respect, and obligation (Graen & Uhl-Bien, 1995, p. 227). This focus is in contrast to past theories’ focus on the individual traits and behaviors of the emergent leader. However, it is likely the traits/behaviors exhibited by the leader allow them to form relationships with other group members. Graen and Uhl-Bien (1995) describe four stages of LMX; the applicability to emergent leadership comes in stage four titled Expansion of Dyadic Partnership to Groups and Network Levels. This level is a systematic network approach that allows leadership relationships beyond the typical superior-subordinate dynamic to include leadership among peers and teammates (Graen & Uhl-Bien, 1995).

In this context, a leader emerges from “the enactment of formally defined roles by organized members,” and the emergence “depends on task structure and individual characteristics” (Graen & Uhl-Bien, 1995, p. 234). In order for an individual to successfully utilize LMX, the leader (or potential leader) must make decisions with mutual trust for one another’s capabilities, deepening of trust, and increased interaction to develop a strong partnership (Graen & Uhl-Bien, 1995). While this theory provides rationale for the leadership aspect of this study, the communication aspect, within a virtual setting, is necessary to review as well.
Social Information Processing.

The Social Information Processing Theory (SIP) developed by Walther (1992) discusses Computer Mediated Communication (CMC) versus face-to-face (FTF) and the lack of social context available in CMC. Therefore, the ability to create differentiated relationships, as outlined in LMX (Dansereau, Graen, & Haga, 1975), in a virtual setting becomes difficult and strained. However, over an extended period of time CMC relationships have the ability to create “fully formed impressions” among group members, allowing a leader to emerge (Walther, 1992). Walther (1992) states it takes “at least four times longer to say something in CMC. Furthermore, George and Sleeth (2000) purport that CMC writing skills will supplement the verbal skills necessary in a FTF setting and that leaders will frequently emerge based on their speed of writing, rate of participation, and ability to clearly articulate concepts and ideas. In conclusion, George and Sleeth (2000) propose that CMC leadership competence is demonstrated by “contributing to member motivation through goal clarification and roadblock reduction,” directive behavior, and targeting influences that create enhanced effects on the team performance (p. 300).

Summary of Tools and Research Studies

Face-to-Face vs. Virtual Teams.

As many organizations introduce geographically dispersed work teams (virtual teams) to their employees and business plans, it is necessary for all employees (executive to entry level) to understand how virtual teams differ from FTF teams. Additionally, beyond understanding the differences in team styles, leaders and executives must also adapt to provide the best possible virtual environment to create a successful outcome. Bathazard, Waldman, Howell, and Atwater
(2004) remind readers that virtual teams are not always the right type of team for a project or assignment depending on the issues; a virtual team may not be effective when the issue is highly emotional or ambiguous, or when the team is short lived. Virtual teams need more time to develop a shared vision and interpersonal relationships; therefore, short-lived teams may not be best suited for a virtual environment. Balthazard et al (2004) support Bordia’s (1997) findings that under time constraints, virtual groups perform better than FTF groups on tasks involving less socio-emotional interaction, and worse on tasks requiring more. However for some companies, the benefit of forming a virtual team with the most qualified individuals outweighs the ambiguity and task complexities.

DeRosa (2009) outlines key challenges for virtual teams, including lack of FTF contact, lack of resources, asynchronous communication based on time zone differences, higher importance given to local teams by team members, lack of information sharing, and lack of training. Any one of these challenges can produce a spiral effect on the team; for example asynchronous communication can cause lack of information sharing and further maintain the seemingly higher importance of FTF teams. To overcome these challenges, DeRosa (2009) studied low performing and high performing virtual teams to examine team differences; concluding that high performing teams showed a higher degree of structure and team composition. Specifically, high performing teams consisted of fewer team members, employees with longer tenure, more meetings to discuss progress and timeline, and the teams had a leader.

Furst, Reeves, Rosen, and Blackburn (2004) used Tuckman’s Stage Model (Tuckman, 1965) of team development to analyze virtual teams and identify their unique challenges in each stage. Tuckman’s (1965) model consists of four stages- forming, storming, norming, and performing.
**Forming.**

During the forming stage, a FTF team would meet each other on an informal basis, providing team members the ability to learn not only about each others’ skills and abilities, but non-work-related items as well. Also, it allows for team members to put a face to a name (Tuckman, 1965). For virtual teams, the forming stage can provide challenges, including fewer opportunities to speak informally about non-work-related items, which results in slower trust formation and more assumptions about team members (Furst et al., 2004).

**Storming.**

During the second stage, storming, team members develop roles based on their strengths, which often results in conflict as the team works to understand who the leader is and what roles fits each person the best (Tuckman, 1965). This type of conflict is present in both traditional and virtual teams; however in virtual teams it is easier for team members to withdraw and in effect communicate less (Furst et al., 2004).

**Norming.**

Teams able to resolve this conflict move to the third stage of norming, at which time the team agrees on modes of communication and methods, increasing trust while developing shared expectations for the group (Tuckman, 1965). Specific to virtual teams, the norming stage challenges the type of communication methods (email, phone, virtual meetings) necessary for the given situation, speed of response, and use of specific software to complete the project (Furst et al., 2004).
Performing.

Finally, the fourth stage, performing, refers to the team actively working towards the completion of their task while encouraging and supporting one another (Tuckman, 1965). For virtual teams, it can be challenging for team members to balance their virtual assignments with their face-to-face assignments and potentially picking up the slack for other team members (Furst et al., 2004). Furthermore, without a connection to each other, team members are often unwilling to support and encourage one another.

In 1977, Tuckman and Jensen added a fifth stage to the model called “adjourning.” The adjourning phase involves the completion of task and team disbandment. This phase was not included in Furst et al.’s (2004) analysis of virtual teams. Therefore, it is unknown at this time how this phase affects a virtual team. Other researchers (Rickards & Morger, 1999; Biggs, 2010 and White, 2009) have added on or revised Tuckman’s Model to include re-norming and the order of phases as transforming, performing, reforming; respectively.

Furst et al.’s (2004) study of virtual teams through Tuckman’s (1965) model resulted in both successful and unsuccessful teams. The successful teams were able to develop and support a team mission throughout the project and identify a leader who assessed the project frequently through revision of timelines and plans. In all, successful teams reported higher clarity of team mission, channels of communication, commitment from team members, and trust (Furst et al, 2004).

Furst et al (2004) and De Rosa (2009) analyzed virtual teams to observe the specific challenges non-existent in FTF groups; many of these observations can be classified as
systematic (non-emotional). Potter and Balthazard (2002) however aimed to understand if group interaction styles effective in FTF teams were also effective in a virtual setting.

Group interaction style is theorized to affect performance because it can impede or enhance team members' ability to bring their unique knowledge and skills to bear on the task, and the extent to which they develop and consider alternative strategies for approaching the task” (Potter & Balthazard, 2002, p. 7).

The results of their study determined that most interaction styles translate from a traditional to virtual setting. Specifically, a constructive group interaction style will allow for positive team member acceptance, satisfaction with the decision-making process, and efficient use of time. Alternatively, passive and aggressive interaction styles will have the opposite effect on teams. Team leaders often dictate the interaction style, and may do so unknowingly. Many researchers (Avolio, Kahai, & Dodge, 2001; Bader & Zacarro, 2009; Bell & Kozlowski, 2002; DeRosa, 2009; Furst, Reeves, Rosen, & Blackburn, 2004) agree that a leader is needed in virtual teams to be successful, this leadership role may be assigned, shared, or emerge.

While interaction styles in a virtual setting can be similar to those in a FTF setting, the ways in which individuals communicate can vary significantly. Much of the communication will be without facial expressions, gestures, posture, vocal tone, inflection, and emotion. Therefore, team members may be interacting for a mutual cause using tactics to elicit positive relationships, while using complex methods of communication. In some cases, the sophistication of the communication technology will allow for easier communication and interaction. Walther (1992) adds that CMC can be beneficial because of communications non-simultaneous nature, specifically stating “one may plan, contemplate, and edits one’s comments more mindfully and deliberately” than one in a FTF setting (p. 23).
Technology and E-Leadership

Avolio, Kahai, and Dodge (2001) define e-leadership as “a social influence process mediated by advanced information technology to produce a change in attitudes, feelings, thinking, behavior, and/or performance with individuals, groups, and/or organizations” (p. 617). This type of leadership can range from hierarchal in nature, to one assigned individual, to shared leadership within a team; the challenge is the organization must co-evolve with the technology to remain successful. In virtual work teams, technology becomes a silent team member that can greatly impact the overall team efficacy. In order to be successful, all team members must understand the technology, and most importantly the leader must be proficient with the ability to provide tips, new ideas, and training to other team members (Avolio et al., 2001).

Sivunen (2006) recommends that leaders learn to effectively use the technology so they can cater to the individual (what are their preferences), provide positive feedback, keep team goals present and in the forefront, and foster team activities. As team members do not often or ever see each other in a face-to-face environment, the daily communication among members may be low, therefore the leader’s role is to connect everyone in a meaningful way. This often means the leader must effectively understand the tools of technology available to them. Virtual team members will have difficulty understanding each other in this environment because of the lack of contextual information, pressures to respond quickly while accurately portraying intent, and a perceived sense of isolation (Walvoord, Redden, Elliott, & Coovert, 2008). Therefore, it is necessary for the virtual team leaders to recognize these difficulties, and by using the proper communication channel, bring all team members back together.

In a study by Sarker, Grewal, and Sarker (2002), the team member with the ability to understand the information systems and use it effectively to promote the group’s mutual interests
will often emerge as the leader of the team. In a virtual setting, team members are asked to use a variety of communication channels to interact with their teammates including, but not limited to, phone, e-mail, document sharing, and video conferencing. The ability for a team member or members to effectively use these channels can result in leadership in the early stages of team task (Sarker et al., 2002). Specifically, a team member may identify one communication channel as best for idea generation while quick questions may be better in a different medium. Reflecting upon the information provided on virtual teams and e-leadership, reviewing virtual leadership behaviors is critical in understanding how and when virtual teams are successful.

**Virtual Team Leadership Behaviors**

Similar to traditional team leadership, virtual team leaders must have the ability to develop relational links, establish trust, and share knowledge between themselves and team members. However, due to the altered context of a virtual environment, leaders must also build and maintain a social climate necessary for team unity and cohesiveness (Kayworth & Leidner, 2002). Furthermore, leaders must also give extra attention to coordinating and managing the communication processes present in the team. Creating a successful team can be a direct result of the leadership style used by an individual; several researchers argue that one particular style is better than the rest, while some say an adaptive style will promote successful results (Balthazard, Waldman, Howell, & Atwater, 2004; Carson, Tesluk, & Marrone, 2007; Huang, Kahai, & Jestice, 2010). Virtual team leadership studies have focused largely on shared leadership, with few studies (Carte, Chidambaram, & Becker, 2006; Kickul & Neuman, 2000; Sarker, Grewal, & Sarker, 2002) on emergent leadership.
Transformational and Transactional Leadership.

Ruggieri (2009) studied the characteristics of leaders who exhibited transactional and transformational philosophies in their leadership styles to understand how followers perceived them, and the level of satisfaction of these followers. Burns (1978) describes transactional leadership as the need for one to gain something from the members of their team; whereas transformational leadership will promote success among team members because it is morally right. As a result, followers described transactional leaders as having a greater need of dominance and order, with a high sense of self, low originality, and high intelligence (Ruggieri, 2009). Based on these characteristics, a transactional leader will “offer positive reinforcement, prizes, praise, compliments, and rewards when goals are reached and will utilize negative reinforcement such as punishment and reproach when errors are made or failures occur” (p. 1018). Conversely, transformational leaders were described as having a greater need for achievement, endurance, nurturance, change, with high originality and high intelligence. These types of leaders are able to increase the team’s level of interest in the project, while respecting the team’s mission and encouraging team members to generate new ideas and potential solutions to problems (Ruggieri, 2009). The study’s conclusion determined that a transformational leadership style produced a higher level of satisfaction than transactional leadership. This simulated study did not account for type of team (project focus, hierarchal, etc), which may elicit different results.

Similarly, Huang, Kahai, and Jestice (2010) studied transactional and transformational leadership in conjunction with media richness, hypothesizing that the level of media richness (technology sophistication) will dictate successful leadership philosophy. Their results indicated that a transformational leaders’ ability to inspire followers to rise above their own self interests,
provide individualized attention and encouragement, and build trust allows them to overcome the challenges of media richness more often than transactional leaders. Whitford and Moss (2009) focused their look at virtual team leadership using the transformational philosophy, exploring goal orientation and follower focus. Simply put, the study was an attempt to understand the connection between leadership style and workplace attitudes. They concluded that many of the messages sent by transformational leaders were diminished when not discussed in a FTF format. Therefore, transformational leadership is negatively influenced by distance especially when followers are more focused on their obligations rather than aspirations (Whitford & Moss, 2009, p.20). Transformational leadership is about “raising others to higher levels of motivation and morality,” which may diminish with the space found in a CMC setting (Burns, 1978, p. 20).

**Successful Leadership Characteristics.**

The altered context of a virtual work environment creates the need for leaders to build team unity and cohesiveness. Kayworth and Leidner (2002) argue that in order to do this, the leader must perform multiple leadership roles simultaneously in order to be effective. As a part of their study, the researchers measured participants’ perceptions regarding leadership effectiveness, role clarity, communication satisfaction, and communication technology. The results indicated effective leadership is associated with team member perceptions of communication effectiveness, and the leader’s ability to establish role clarity, which would require a leader to employ multiple leadership styles to be effective. For example, the leader may institute a formal style for role clarity but an informal style for promoting teamwork and unity. Ruggieri (2009), Huang et al (2010), and Kayworth and Leidner (2002) provide two ideas for effective leadership in a virtual environment. Several other researchers have dedicated their
studies to either shared or emergent leadership, or both to understand the effectiveness of both styles.

**Shared Leadership in Virtual Teams**

Shared leadership has been defined by several researchers (Bathazard, Waldman, Howell, & Atwater et al, 2004; Carson, Tesluk, & Marrone, 2007; Huang, Kahai, & Jestice, 2010; Shuffler, Wiese, Salas, & Burke, 2010), and they commonly agree that shared leadership refers to a team whose members agree to distribute the leadership responsibilities across group members, allowing mutual influence among all members. Shuffler et al (2010) found that the evolution of shared leadership takes place during the transition phase of team formation and role clarity because it allows team members to evenly disburse specific responsibilities (timeline, evaluating, feedback, roles, etc) and ultimately builds trust and reduces future member role conflict. Similarly, Social Information Processing (SIP) Theory explains that in a CMC context it takes longer to form full impressions of team members which align with the idea that shared leadership evolves in the transition phase (Walther, 1992). Their results concluded that shared leadership is often most successful in interdependent and complex tasks.

According to Shuffler et al (2010), the goal of leaders in a shared leadership environment should be to break down the tasks into tangible and achievable goals. Elaborating on the work by Shuffler et al. (2010), Carson, Tesluk, & Marrone, (2007) examined shared leadership in virtual work teams from time of conception to project completion. They determined two main factors that influence the need for shared leadership, “internal team environment, including a shared purpose, social support, and voice, and level of external coaching support” (Carson et al, 2007, p. 1218). Successful communication in a virtual setting is founded on “goal clarification” (shared
purpose) and “roadblock reduction” (support and voice); the leader’s ability to communicate these items will allow the team to enjoy their time together (Griffin, 2006, p. 300). As a result of their study, external coaching (team coaching by an external leader) with the team to support the need for shared leadership in a currently unsupportive team environment will allow the team to become successful.

In summary, the authors determined that the greater the shared leadership, the more successful the team performance (Carson et al, 2007). While there has been support from several studies for shared leadership, little is known about the virtual environment in which these teams are interacting and the types of tasks and projects the groups are working to complete. The concept of shared leadership would be in contrast to the relational aspect of LMX Theory because this aspect focuses on the relationship built between leader and followers. In the shared leadership environment, the focus is on the relationships among team members with little regard to defining a set leader (Carson et al, 2007).

**Emergent Leadership**

In contrast to shared leadership, emergent leadership is informal in nature because it is not predetermined by outside management or formally established by the team. Team members identify emergent leaders as the team leader throughout the project task (George & Sleeth, 2000). The biggest difference between emergent and shared leadership is that a leader can emerge in an environment with or without a formal/assigned leader and is accepted by all team members as the leader of the group; frequently this acceptance is subconscious and not identified until asked to do so. George & Sleeth (2000) agree “emergent leaders achieve their role by the willing support of followers” (p. 295). Achieving this leadership status is done by the member who
“contributes to the group’s primary task or displays loyalty to group norms” (p. 295). Some organizations and executive management teams find the idea of emergent leadership most effective because it allows for the best candidate to come forward and oversee the team’s activities, and in essence the team is choosing the leader, which should satisfy everyone (Carte, Chidambaram, & Becker, 2006). Emergent leaders are often identified as “initiating more ideas, expressing more opinions, and asking more questions” (p. 326). Additionally, Simoff and Sudweeks (2005) describe emergent leaders as emerging based on the needs of the group by exhibiting attributes such as early and frequent participation, communicating often with a quality message, and building confidence among team members regarding their skills and expertise.

According to Tyran, Tyran, and Shepherd (2003) emergent leadership occurs most often in self managed teams, teams that do not have an assigned leader and the team members have not discussed leadership roles at time of formation. Emergent leaders are described by team members as taking initiative, assigning tasks, setting performance standards, and coordinating team efforts during times when they are in need of guidance and facilitation (Tyan et al, 2003). Tyran et al (2003) researched 13 virtual teams to understand the role of leadership in virtual teams, paying particular attention to how and why leaders emerge. They concluded that high performing teams had a strong leader and low performing teams had no emergent leader; however it was inconclusive if emergent leadership was the reason for high team performance due to the complex nature of this leadership style. The results included no emergent leaders in three of the top six performing teams and emergent leaders in six of the bottom seven performing teams. Thus displaying the complexity involved in analyzing emergent leadership and performance in virtual teams (Tyran et al., 2003). Furthermore, the authors concluded that leaders of high performing teams were able to gain the trust of teammates by being reliable,
consistent, showing initiative, and having the necessary experience to back up their ideas and claims (Tyran et al, 2003). Understanding these characteristics, the authors re-examined their results to understand trust among team members, concluding that high performing teams either had an emergent leader that was highly trusted or the trust among team members was high (Tyran et al., 2003, p.190).

Similarly, Carte, Chidambaram, and Becker (2006) completed a study focused on leadership behaviors in self-managed virtual teams, specifically researching how and whether emergent leadership impacts team performance. After reviewing and separating high performing from low performing teams, the conclusion was high performing self-managed teams were successful using emergent, concentrated, and shared leadership styles. Overall, Carte et al (2006) concluded that leadership behaviors, regardless of the behavior, exhibited early in the team’s life, resulted in a more productive and successful team. Tyran et al’s (2007) and Carte et al’s (2006) research have provided a foundation for researching emergent leadership in virtual work teams yet leaves much to be answered about the effectiveness of emergent leaders in successful virtual teams.

Simoff and Sudweeks (2005) conducted a study of virtual team members to understand if members who spoke more often emerged as the team’s leader. Their results indicated that emergent leaders spoke more about everything, with greatest importance given to their more frequent communication on task-related items. While communicating more often did not determine an emergent leader, talking about the project frequently with others did. Simoff and Sudweeks (2005) also concluded that emergent leadership impacts the group dynamic and provides executive management the ability to determine who may be best to lead future projects. Researchers Kickul and Neuman (2000) also studied emergent leadership behaviors in an effort
to understand if personality and cognitive ability of the emergent leader are predictors of the overall team performance. The results of their study indicated that cognitive ability, extroversion, and openness would predict emergent leadership in a team environment and successful team performance. Furthermore, the study found that conscientiousness on the part of the emergent leader would not have an effect beyond cognitive ability in accounting for the teams overall performance, which is in contrast to what they hypothesized. Simoff and Sudweeks (2005) and Kickul and Neuman (2000) examined specific traits related to leadership to determine the effects on emergent leadership, leaving room for additional skills and traits to be analyzed in conjunction with emerging leaders in virtual teams.

**Literature Summary and Research Questions**

In summary, several leadership approaches have been proven successful in virtual team environments, with particular attention given to shared and emergent leadership behaviors. In a virtual team environment, the ability for a specific leadership style to be effective depends largely on team composition and task complexity. Virtual teams often include individuals of different cultural backgrounds, with little to no virtual team experience, and/or working with a new technology for the first time. Therefore, leadership in the virtual environment can greatly impact the team performance, which is relevant and important for all organizations.

In the proposed study, groups with an emergent leader will not have a typical leader-subordinate relationship, rather a group of peers; therefore understanding if an emergent leader forms this type of relationship with group members would tell researchers and scholars about the necessity for a formal leader in a project task. Therefore, the LMX relationship-based model approach is most applicable to the proposed study because it provides a basis for what an
emergent leader will do in order to form high quality and differentiated relationships and therefore a successful team. Specifically, the relational aspect of LMX dictates that a leader will form specific and custom relationships with each member of the group because it will result in a successful group outcome, and thereby allowing the leader to be successful. Further, mutual exchange among team members is created to develop a relationship for the betterment of the team and leader, not necessarily for the value of a new relationship or to advance that team member. In short, the relational aspect of LMX is a transactional relationship because each member is hoping to gain something from the other. Based on the need expressed in CMC theory for more time in a virtual setting, the need to study leadership roles at the beginning, middle, and end of a project becomes increasingly important. Understanding this dynamic will allow organizations to make an informed decision on virtual group formation.

Based on prior literature, the LMX relationship-based model, and SIP; it is necessary to study emergent leadership in virtual teams because the outcome of the study can have a significant impact on how organizations view virtual team leadership development, particularly choosing a style that best fits the task and individuals. Therefore, the research questions arise:

RQ1: In virtual teams without formal leadership established, is there an emergent leader perceived by team members?

RQ2: Based on the perceptions of team members, what traits does the emergent leader exhibit?

RQ3: Based on team members’ responses, how does/did the emergent leader form relationships with team members?
CHAPTER 3: RESEARCH SCOPE AND METHODS

With consideration to the studies performed by past researchers, the study conducted for this thesis encompassed both quantitative and qualitative research methods, commonly referred to as triangulation. According to Neuman (2006), “triangulation of method means mixing qualitative and quantitative styles of research and data,” this allows sequential analysis of information, first with a quantitative survey and second with a qualitative interview (p. 150). Furthermore, mixing the research methods can be completed either sequentially or simultaneously; for the purposes of this study triangulation of methods occurred sequentially. First, a quantitative survey was used to discover qualifying participants for a follow up interview. The second method, qualitative interviewing, was used to understand the underlying reasons why and how an individual team member emerges as a leader in a virtual work team. Combining the research styles allowed for a narrowing of participants and subsequent interviews, which serve as the foundation for discussion. The following section will provide the scope, design, and rationale for both research methods.

Survey Scope and Design

Participants.

This research is focused on participants currently or previously working in a virtual team within their workplace environment. Much of the prior research (Sarker, Grewal, and Sarker, 2002; Kickul and Neuman, 2000; Carte, Chidambaram, and Becker, 2006; Kayworth and Leidner, 2002; Ruggieri, 2009) focused on virtual teams in a non-work related environment, specifically using simulations with college students or colleagues. Using workplace teams provides an underlying assumption that the participants will have increased accountability for the
team outcome because their pay, promotion opportunities, and workplace reputation are actual consequences for their actions (or inactions). Therefore, the scope of this study included participants working in virtual teams for their current or past paid job.

Second, the participants are from various workplace virtual teams across various organizations in the United States. Not all participants in a given virtual team were invited to complete the survey based on available resources, availability of the team, and limited time to gain proper authorization from the necessary individuals to interview all team members. Similar past studies (Rice, Davidson, Dannenhoffer, and Gay, 2007; Furst, Reeves, Rosen, and Blackburn, 2004; Carson, Tesluk, and Marrone, 2007; Sivunen, 2006) that have opted to use participants in workplace virtual teams frequently observed entire teams to understand not only leadership, but overall team dynamic. The research for this paper will focus on the leadership dynamic, specifically emergent leadership.

Finally, the participants for the survey were solicited from a peer group at Gonzaga University and two Midwest Fortune 500 companies based on personal and professional access to individuals within these organizations. Additionally, previous interactions with both organizations indicated past experiences with virtual work teams. The survey was created via an online tool and individuals were invited to complete via email. The survey was sent to approximately 200 individuals, with response from 75 individuals (38% response rate). From the 75 participants, 20 individuals were chosen for a follow up interviews based on the criteria outlined in the next section. Twelve individuals responded to interview requests and were subsequently interviewed. Participants’ ages ranged from 25-65 and they have currently or previously worked with companies across the continental United States.
Virtual Team Characteristics.

In order to identify participants for this study, the following criteria were provided and identified during the survey process. Participants worked on the same virtual team for at least three months, having completed their work within the past 13 months. The time period of greater than three months was chosen to allow enough time to identify any changes in leadership status throughout the project life cycle. Specifically, identification of leadership can take longer in a CMC setting because it takes up to four times longer to communicate (Walther, 1992). Work completed in the past 13 months will allow participants to accurately recall their experiences within the group. The virtual team could have been either completely virtual (no team member in the same location) or hybrid in nature (all or some team members are in dispersed locations). The virtual team could have no less than three and no more than 12 members. The participants’ involvement in the group positively or negatively impacted their employment status. Several previous studies (Sarker, Grewal, & Sarker, 2002; Kickul & Neuman, 2000; Carte, Chidambaram, & Becker, 2006; Kayworth & Leidner, 2002; Ruggieri, 2009) used simulated teams to complete their studies on leadership in virtual teams, and thereby reducing incentive to complete projects successfully.

Design.

The survey (appendix A) was used to identify potential participants for the follow up interview based on the scope outlined above, with particular importance paid to individuals in workplace virtual teams and completed projects. For groups in process, at least three-quarters of the task must be completed to allow time for any leadership changes. Nominal level discrete variables were used for many questions to measure the differences among categories; for
example, participants were able to choose among the following categories for virtual team: work, school, community/volunteer, or industry committee (Neuman, 2006). This type of question generation allowed for narrowing of participants for the follow up interview process. Neuman (2006) states “the survey asks many people (respondents) about their beliefs, opinions, characteristics, and past or present behavior” (p. 273). The survey for this study was used to assess the characteristics of the participant and the relationship with the leader of the group. Surveys are not appropriate for “why” questions, therefore, a follow up interview was used to get to the root of why an individual emerged as a leader in the particular team (Neuman, 2006).

At the conclusion of the survey questions, respondents were able to include their email and/or phone number for the follow up interview session. More than half of respondents included contact information. Analysis of the survey responses was based on scope (virtual/hybrid teams, work team, completed in last 12 months, worked with more than 5 individuals, etc.). Twenty participants were selected and each person was contacted for the follow up interview; 12 were available and interviewed.

**Interview Follow-Up**

**Design.**

The design of the interview (appendix B) sessions sought to answer what type of leadership dynamic was present within the virtual work team, what the team’s success rate was, and how each of these was achieved. Eriksson and Kovalainen (2011) state that many interviews with “business people” fall within the guided and semi-structured interview category because it can answer both the “what” and “how” questions (p. 82). For example, what did the leader do to engage participants in group discussion? Or, how did the leader differentiate among team
members? The interview questions were a compilation of primary and secondary questions to
engage the participant while allowing time for follow up questions to gain a complete picture, or
clarify thoughts. The primary questions (or guided questions) allowed the research to be
complete and comparable to others’ responses on the same topics and concepts. Most questions
were open-ended in nature with several closed-ended confirming questions to ensure
understanding of survey responses. All interviews took place over the phone and ranged from 15
to 30 minutes. With participants’ authorization, phone interviews were recorded and written
notes were taken throughout the call.

Interview Analysis

After initial analysis of the interview transcripts, common themes were discovered and
conceptualized into four categories—team formation, perception of leadership at beginning and
end (including when emergent leader was perceived to be known), characteristics of the
emergent leader, and perceived impact to team success. These themes were developed as
common responses were discovered after the initial analysis of interview responses. Neuman
(2006) states “a qualitative researcher analyzes data by organizing it into categories on the basis
of themes, concepts, or similar features” (p. 460). Additionally, these themes or concepts are
discovered as researchers begin reading through data, such as field or interview notes (Neuman,
2006).

Interview responses themes were identified through open coding in which key words
such as differentiation, characteristics, and success/failure were assigned to participants’
statements (Neuman, 2006). Prior research and theory impacted the themes, specifically,
relationship-based LMX identified differentiation as an impactful leadership characteristic
(Graen & Uhl-Bien, 1995). The interview responses were evaluated for similarities and differences and the implications of the two. First, the responses were coded to identify themes among the participants’ experiences, and second axial coding was completed to connect responses to past research and theory. Neuman (2006) explains a “researcher’s goal is to organize specific details into a coherent picture, model, or set of interlocked concepts” (p. 459). Linking participants’ responses into the four categories and developing conclusions for consideration completed the organization of responses.

**Anonymity and Confidentiality**

In order to ensure the confidentiality of all participants, each participant was coded by a number and their names will not appear in this study. Upon response to the initial survey, individuals were identified by name or email address to conduct follow up interviews. Once follow up interviews were completed, conversations were saved as Participant 1 (P1, etc), and names were not recorded in handwritten notes. The online survey provided acknowledgement of their willingness to complete the survey and assurance that names would be kept confidential. By completing the survey, participants agreed to informed consent and providing name, phone number, and/or email address within the survey response provided consent for the follow up interview.
CHAPTER 4: THE STUDY

Results of the Study

75 individuals from numerous organizations across the United States participated in the online survey, a 38% response rate. Two methods were used in this study to collect data- a survey requesting basic information about the respondent’s experiences within a virtual work team, and an interview conducted in follow up to the survey results with willing participants. As stated previously, 75 individuals completed the survey and from those 75, 20 individuals were identified as fitting the criteria for follow up interviews. After contacting the 20 individuals, 12 responded positively for a follow up interview and seven individuals were selected for the results section. Upon completion of research, 75 responses were collected and 12 interviews were conducted.

Survey Results.

The online survey (appendix A) was utilized to identify individuals with experience in a virtual workplace environment. Individuals responding to the survey with virtual experience only for continuing education (online university) were excluded. The survey was split into two sections, one for demographics and another for virtual team context. The survey was successful in narrowing down respondents for the follow up interview. The respondent’s demographic information is summarized in Table 1 below.
## Table 1:
Demographic Information (Survey)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Age Range</th>
<th>Gender</th>
<th>Region/Location</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22-31: 27, 36%</td>
<td>Male: 18, 24%</td>
<td>Southeast: 2, 2.7%</td>
<td>Sales/Marketing: 5, 6.7%</td>
</tr>
<tr>
<td></td>
<td>32-41: 18, 24%</td>
<td>Female: 57,</td>
<td>Southwest: 8,</td>
<td>Public Relations: 13, 17.3%</td>
</tr>
<tr>
<td></td>
<td>42-51: 19, 25%</td>
<td>76%</td>
<td>10.7%</td>
<td>Non-Profit: 6, 8%</td>
</tr>
<tr>
<td></td>
<td>52-61: 9, 12%</td>
<td>South: 12, 16%</td>
<td>Human Resources: 7, 9.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 62: 1, 1%</td>
<td>Northwest: 19, 25%</td>
<td>Customer Service: 11, 14.7%</td>
<td></td>
</tr>
<tr>
<td>Did Not</td>
<td>Disclose: 1, 1%</td>
<td>Northeast: 5, 6.7%</td>
<td>Business Development: 7, 9.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>North: 2, 2.7%</td>
<td>Finance: 3, 4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mid-West: 14, 18.7%</td>
<td>Military: 1, 1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central: 5, 6.7%</td>
<td>Teacher: 5, 6.7%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outside U.S.: 2,</td>
<td>N/A: 16, 21.3%</td>
<td></td>
</tr>
</tbody>
</table>
Once survey responses were collected, the results were analyzed to identify specific categories related to virtual team context and leadership assignments. In particular, the virtual team context category served as the first tier of analysis. Any response with a virtual team context of school/education was analyzed in conjunction with an open-ended response describing team task to confirm responses should not be considered. After the first round of elimination, responses to questions about pre-determined leadership were analyzed. For example, if a respondent answered ‘yes’ to pre-determined leadership, those were considered if leadership was assigned by an outside authority or assumed based on hierarchal status. Additionally, if the respondent answered ‘no’ to pre-determined leadership, respondents were considered if leadership was determined by the group. All other respondents were eliminated. The result was thirty-five respondents. Reviewing the responses for availability to the follow up interview completed the analysis. Twenty respondents were available for follow-up interviews and contacted using provided information. Twelve individuals responded positively and were interviewed.

**Interview Results.**

The 12 interviews were conducted over a period of two weeks with each phone call averaging 15 to 40 minutes. Initial analysis took place during the interviews to notate common themes among the responses and further connections between the discussed groups. A copy of
the interview questions is included in Appendix B. Initial analysis of interviews identified seven
individuals meeting the necessary criteria for this study. Specifically, one individual was
involved in an academic team and four others were part of team’s working in a traditional
hierarchal setting (one manager with one or several direct reports). Additional analysis of the
narrowed survey results and the interview follow up responses resulted in four categories-
Effects of Team Formation, Leadership Perceptions at Beginning and End of Project, Emergent
Leadership Characteristics, and Team Success. Results are based on perceptions identified by
respondents and supported by past literature and theory. These categories are summarized in
Appendix C as Focused Interview Results by Participant (P1-P7).

Summary of Results

Theme 1: The Effects of Team Formation.

All teams were developed as a task force with disbandment scheduled to conclude upon
project completion. The particular task each team dealt with had similarities and differences; for
this study, the team task was not analyzed beyond confirmation that team was built for a specific
purpose (i.e. task, project). Three interviews were conducted with individuals involved in virtual
work teams based on necessity, involving one manager and several direct reports. The concept of
emergent leadership is less prevalent in these settings because the direct reports work on their
specific goals with little crossover or interaction with other team members (outside their
manager). These interviews were not included within the results of this study. The remaining
participants were part of small group work teams, ranging from three to 15 people. Most
participants felt their small team size was a benefit in the virtual setting because of the increased
need to communicate more frequently to build a team dynamic. The importance of increased
communication and time to form differentiated relationships points to the need for small teams as the tasks would become increasingly complex with more than 15 members (Griffin, 2006).

Five of the seven participants’ teams were working on teams that had on-going projects; however only two of those five participants have yet to complete the assignment. The two participants’ teams that were still working on their team task had been formed at least six months ago and in their final phases of completion. The other three participants are still working together with their team on additional projects and have completed at least one project. It was necessary for the teams to be far enough into their project to identify leadership, when it occurred, and if any changes in leadership have occurred since initial emergence. In the virtual team setting, it can take at least four times longer to say something and therefore longer to identify leadership (Walther, 1992). The remaining two participants worked on teams with task completion, yet had concluded their task within the last six months.

Prior to moving on to leadership, it is important to understand how the teams were structured. The structure of the team relates to emergent leadership because certain work teams (as described above) are less likely to have emergent leadership if the team has a manager-subordinate relationship. Two of the seven groups have group members that span the hierarchal chart from entry level to president. As a result, the participant’s perception coming into the group task was the individual with the highest ranking was the leader regardless of task. Of the other five groups, two were cross-functional and three were peer groups. The cross-functional teams were made up of individuals serving different roles within in the organization that have come together to provide diverse viewpoints on the task team. The peer group teams were made up of members with no subordinate or managerial relationship with another group member. The greatest difference between the hierarchal teams from the peer and cross-functional groups was
the pre-determined leadership assignment. Specifically, participants in the hierarchal teams perceived the individual with highest ranking as the leader at time of team conception. This dynamic will be discussed further in the next theme.

**Theme 2: Leadership Perceptions at Beginning and End (or end at time of research completion).**

Once a team is formed, some teams may choose to use their first meeting to discuss the roles of team members, while others may overlook this task in the excitement to begin the task. Typically, in a FTF setting individuals will meet informally to determine skills and abilities of all team members (Tuckman, 1965). However, the virtual platform challenges team members to set aside specific time(s) to learn about one another. Four of the seven participants’ teams chose not to discuss the roles of each team member, including leadership. The remaining three teams had a conversation about member roles and leadership, with two teams subsequently selecting an emergent leader regardless of their initial conversation. The third team that discussed member roles determined that the team could move forward with a shared leadership dynamic, which deemed successful for the group. As described in previous studies on shared leadership, many virtual teams will decide on shared leadership when member roles are discussed prior to beginning project task (Shuffler et al, 2010). In contrast, George and Sleeth (2000) point out that emergent leadership occurs through identification by team members throughout the project task.

Regardless of initial conversation on member roles, an emergent leader was perceived by six of the seven participants in their groups. Outside of one participant’s perception, it took several meetings before the participant recognized a team member as emerging as the team’s leader. Specifically, participants felt it took anywhere from one to six meetings before they could
identify the group leader, an average of 3.7 meetings. All participants defined this as the beginning phase of their task, with the leader emerging once task progress began. As discussed in further detail in the next theme, the perceived leadership characteristics were integral in identifying the emergent leader. Many of the participants stated expertise and passion for the project were the initial identifiers of the group’s emergent leader. As time progressed, characteristics like communication style/methods and differentiation solidified the leader’s status.

Based on the emergent leader’s characteristics and initial leadership identification, five of the seven participants perceived no leadership change once the emergent leader was identified. In a study on shared leadership by Carson, Tesluk, and Marrone (2007), leadership was examined at various points throughout the task project noting any leadership changes; therefore it was relevant to examine this aspect from an emergent leader perspective. One participant perceived an individual as an emergent leader in beginning stages of project task due to their passion for completing the project on time and within the task requirements. However, as time progressed the emergent leader began to exhibit conflicting characteristics such as pushing their personal agenda and unwillingness to listen to differing viewpoints. As a result, this participant believes a change in leadership will occur once assessment of the task progress is completed. Based on Tuckman’s (1965) four stages of team formation, this team is stuck in the “storming” phase because the group has been unable to establish effective roles and therefore many members have withdrawn and decreased their communication. Leadership perception is tightly linked to the characteristics by an individual within the course of the project, specifically identification of emergent leader within the team storming stage.
Theme 3: Perceived Emergent Leader Characteristics.

After initial analysis of the interview transcripts, it was evident that many of the described effective leadership characteristics were shared across the participants. These characteristics were then broken into three categories- most commonly identified characteristics, moderately identified characteristics, and other characteristic considerations. All characteristics in each category were perceived and identified by the interview participants.

Commonly Identified Characteristics.

For each of the following commonly identified characteristics, five of the six emergent leadership groups identified them influencing their perception of leader, as well as effectiveness of the emergent leader. First, differentiation was identified by participants in each group as an impactful characteristic aiding in determining leadership. More importantly, differentiation elicited the necessary respect needed to follow the leader’s guidance. The relationship approach to LMX supports the need for differentiation from effective leaders, stating differentiated relationships with each team member will create mutual trust, respect, and accountability (Graen & Uhl-Bien, 1995). Additionally, Simoff and Sudweeks (2005) describe emergent leaders as those able to build confidence among team members regarding their skills and expertise. Participants described differentiation in several forms including delegation based on the individual’s strengths, validating each opinion by recognizing in front of the group, and creating accountability among the group members. For example, accountability was created by relating the individuals’ task to the overall task goal. One participant stated, “The leader recognized the value of each person and positioned things to validate both sides and then progress the team forward.”
Second, participants frequently identified the leader as the person with the most expertise related to the project task. Prior studies indicated importance of task expertise. This study determined the combination of expertise and additional characteristics (differentiation, open communication, etc.) allowed a leader to keep their role throughout project completion.

Expertise was identified by participants not by the individual’s title but by their communication of their knowledge in the first several meetings. The leader’s communication during those first few meetings allowed participants to identify them as “experts” which was articulated by their direction on how to move forward. For example, one participant identified the emergent leader once that individual discussed their previous experiences on a similar task, specifically how and why their particular course of action was successful.

*Open dialogue (or open communication)* was also identified by five of the six participants on an emergent leadership team as impacting leadership assignment. Often times, participants identified open communication from the leader as collaborative language and unbiased listening. For one participant their team’s emergent leader continued conversations offline (phone or individual email) with team members to gain perspective and understanding on their view of project task. Another participant identified open dialogue as structuring team meetings to allow everyone’s input, for example calling out to individuals who have not had an opportunity to share their feedback.

*Moderately Identified Characteristics.*

Task passion, willingness to learn or ask for help, and encouragement were identified as impactful characteristics from the emergent leader by two or more participants. *Task passion* was identified as one of the initial indicators that an individual was emerging as the leader. This
passion often translated to moving the task forward, while working with other characteristics to create team success. For example, one participant stated task passion caused them to identify the emergent leader, however as time progressed this passion clouded the leader’s ability to be open to diverse perspectives. Prior research on emergent leadership did not discuss task passion as an indicator for leadership perception by other team members.

*Willingness to learn* was identified by several participants as a characteristic exhibited by leaders that built trust between group member’s and the leader. This characteristic is closely linked to differentiation because it involves reaching out to individuals who have greater expertise in a particular area. The difference becomes apparent when a leader reaches outside of the team for additional assistance in an effort to keep the team moving forward. For example, one participant described how their leader identified that no current team member was a technology expert and reached out to an information systems specialist for help. Further, this leader maintained communication with the information systems contact and was able to resolve subsequent technology issues quickly.

Finally, *encouragement* was perceived by half of the participants as a valuable characteristic used by the emergent leader. For these participants, encouragement came in the form of showing respect, serving as a mentor, and praising individual team members. One participant shared how their leader reached out to them for their ideas on a specific topic (shows respect) and subsequently encouraged them to share their ideas in an upcoming meeting. As a result the individual was praised by the leader and their direct supervisor. Another participant felt the leader served as a mentor because they took the time to work with them individually on complex task components. As a result the leader built respect and created a stronger team. Graen
and Uhl-Bien (1995) describe the leader’s ability to develop a partnership with their team stems from their ability to develop strong partnerships through mutual trust and respect.

**Other Characteristic Considerations.**

Singularly, participants identified additional characteristics that were impactful to their perception of an emergent leader. First, advanced technology experience was identified as impactful for one participant because they were working with advanced tools such as virtual classrooms. In comparison, other participants were not required to use advanced technology tools to complete their task (phone, conference lines, e-mail, etc.). Several other participants identified their group leader as being organized. This is not to state that other leaders were not organized, but that it was not identified as an impactful characteristic. Specifically, the perception was that organization was most impactful because the task was complex.

**Theme 4: Impact to Team Success.**

Overall, five of the six teams with emergent leaders identified their team as a success. Specifically, the impact of the emergent leader allowed the team to be successful. In most cases, the emergent leader’s ability to use a combination of the above characteristics elicited a positive outcome for the entire team. For example, one participant stated the leader’s task expertise and differentiation provided a positive working environment and successful team outcome.

Alternatively, one participant identified that while the leader initially exhibited characteristics (task passion, organization) indicative of leadership, as the task progressed the leader’s other prevalent characteristics (one-sided communication, moving own agenda) were detrimental to the team’s success.
The results suggest that in virtual work teams without formal leadership (defined as leadership assumed based on status or not assigned) an emergent leader is perceived by team members. Further, the emergent leader exhibits numerous characteristics solidifying their status as group leader. These characteristics include task expert, differentiation, open communication, and encouragement. Finally, the results suggest that emergent leaders form differing relationships with each team member based on individual strengths, all while communicating the importance of individual accountability.

Discussion

The results of this study provided several implications based on the perceptions of group participants regarding emergent leadership in virtual work teams. George and Sleeth (2000) share that individuals are identified by team members as emergent leaders throughout the process of completing the assigned task. These results have provided a basis for how that individual is perceived and identified as an emergent leader based on displayed characteristics throughout the task. The next section will provide a discussion on the main implications resulting from the above study.

Implications for Virtual Teams without Formal Leadership.

The most significant implication for teams without formal leadership is the act of a team member emerging as the leader of the team. Formal leadership is typically determined by an outside authority which cannot be overturned. As perceived by the majority of participants in this study, an individual emerged as the leader of the group at the beginning of project task. The individual emerges as the leader based on the support and identification of group members (George & Sleeth, 2000, pg. 295). The results show that teams will frequently identify a leader
regardless of their status at the beginning of project task, especially if team member roles are not discussed during the beginning phases.

Previous studies by Tyran, Tyran, and Shepherd (2003); Carte, Chidambaram, and Becker (2006); and Simoff and Sudweeks (2005) focused on emergent leadership in “self-managed” teams. Self-managed teams do not focus on leadership roles or definitions because they are “assumed to be self-leading, because leadership is assumed to be less important when all team members are equally responsible for performance outcomes” (Tyran et al, 2003, p. 184). This study provides a new perspective on the study of teams with emergent leaders because it focuses on leadership assignments prior to the task. Specifically, the perceptions of individuals on the role of leadership within the group would be considered “informal” because the role is either assumed or unknown. Similar to studies of self-managed teams, the results of this study implies emergent leadership exists in virtual teams without formal leadership establishment. Therefore research question number one, is there an emergent leader perceived by team members in virtual teams without formal leadership, is answered positively.

This study of virtual teams also provides perspective on the establishment of team roles based on an initial team conversation regarding team member roles. The teams with an emergent leader were also identified as those teams that did not have a conversation about leadership roles prior to the beginning of project start. According to Tyran et al, 2003, emergent leadership occurs most often when the team members have not discussed leadership roles at the time of formation. Tuckman (1965) describes the “storming” stage of team development as the time when team members develop roles based on their strengths, often causing conflict as the team works to determine the best leader. Within the studied teams, participants overlooked the conversation on team roles and therefore resulted in seemingly un-lead teams evolving to teams
with emergent leaders. Perceptions of individuals within this study imply emergent leadership will exist in teams that do not discuss group member roles in the “storming” phase.

Finally, this study implies that in virtual teams where an emergent leader is identified, teams will often be successful. Specific to this study, five of the six groups with emergent leadership were perceived as successful by the interviewed team member. Success was rated by the interviewee based on project completion, successful outcomes, employer satisfaction, and team member satisfaction with group members/roles. Tyran et al (2003) concluded that successful virtual teams have a strong leader, however that leader may not be emergent in nature as some low performing teams also exhibited an emergent leader. Carte et al (2006) studied self-managed teams and determined success was achieved in virtual teams with various leadership behaviors (shared, emergent, and concentrated). In conclusion, the results of this study provide reasoning for successful virtual teams based on emergent leadership. Further, determination of a successful virtual team was analyzed in conjunction with characteristics displayed by emergent leaders.

**Implications for Emergent Leadership Based on the Individual’s Characteristics.**

An emergent leader is not simply the person a member of the group decides is the leader on a whim; rather that person exhibits certain characteristics that qualify them for the position. As identified by the participants of this study, those characteristics ranged from organization to task expertise. George and Sleeth (2000) states, achieving this leadership status is done so by an individual that “contributes to the group’s primary task or displays loyalty to group norms” (p. 295). Based on the results of this study, it can be implicated that initial and early contributions to the project’s advancement allows group members to identify the emergent leader. For example,
five participants stated the emergent leader was the first person to advance the task. This advancement is closely linked to the individual’s expertise of the work; which was identified by all but one participant as a characteristic for their group’s emergent leader. Similar to Carte et al (2006) who stated emergent leaders were identified as “asking more questions,” and Kickul and Nueman (2000) who stated “openness” will predict leadership; participants of this study perceived their emergent leader as an open communicator with a willingness to learn from other members of the group. In turn, group members felt a greater level of trust for this individual.

Additionally, Carte et al (2006) concluded individuals who exhibited “leadership behaviors” early in the team’s life cycle were perceived as the group’s leader. Although this perception proved to be similar in this study, it may not always indicate team success. For example, participant five’s team had an emergent leader that exhibited leadership behaviors like task passion early in the team’s lifecycle; however after several team meetings that passion did not translate to successful leadership or successful teamwork. Therefore, it can be implied that an individual must express multiple leadership behaviors to maintain a cohesive and successful team. Based on the results on this study, it is concluded individuals must exhibit task expertise, differentiation, and open dialogue/communication in order to be perceived as an emergent leader.

In a previous study completed by Simoff and Sudweeks (2005), frequency and amount of communication was studied to determine if the individual who communicated more frequently was perceived as the leader. They concluded emergent leaders spoke more about everything, specifically items related to project completion. Perceptions from the participants of this study did not conclude that the identified leader spoke more about everything or even the project. However, their communication was viewed as impactful in moving the project toward completion. Furthermore, the individual who was able to move the task forward early in the
team’s lifecycle was perceived as the leader. Walther (1992) concluded that in a CMC environment, it takes longer to create fully formed impressions with group members and longer to say something. This study concluded that individuals who are able to reduce the amount of time forming relationships with team members (differentiation) and express their thoughts or ideas quicker were perceived as the team’s leader. Last, individuals who were able to communicate differentiation among the team members were viewed as the team leader. In conclusion, research question number two (what traits are exhibited by the emergent leader) is answered with multiple characteristics factoring into identification of leadership and subsequent successful task performance.

**Implications for Relationships between Emergent Leader and Group Members.**

The ability for the participant to identify an individual as a leader depended significantly on the perceived relationships the leader established with the team members. Simoff and Sudweeks (2005) describe emergent leaders as individuals who are able to build confidence among team members regarding their individual skills and expertise. Further, Tyran et al (2003) describe emergent leaders as individuals who assign tasks, set performance standards, and coordinate team efforts. Participants in the studied successful virtual teams identified the emergent leader as individuals who exhibited similar skills, specifically delegation, accountability, and recognition. This perception is defined as differentiation through the relationship approach to LMX.

Graen and Uhl-Bien (1995) state a potential leader must develop strong partnerships with team members in order to complete the transaction and benefit from the partnership. In this study, participants described the leader as developing relationships with team members by
talking offline to gain their expertise on a specific task, recognizing and assigning tasks based on individuals’ strengths, and providing rationale for task assignment. The challenge for individuals in a group with no formal leadership is to think beyond the typical superior-subordinate relationship and allow differentiated relationships to form (Graen & Uhl-Bien, 1995). Most participants perceived this relationship as transactional in nature because they were both hoping the partnership would result in a successful project outcome. The results of this study supported the importance of developing differentiated relationships among team members as articulated in the relationship-based LMX theory. The implication for a team with an emergent leader who is able to maintain differentiated relationships is a successful project outcome. Therefore, in response to research question number three (how does an emergent leader form relationships), an emergent leader is able to create impactful relationships with team members based on their strengths and ability to move the group forward.

In summary, the results of the study provided several implications for scholars, researchers, and employers. Scholars and researchers are provided with a framework for further research on perceived emergent leadership characteristics and the impact these characteristics have on the overall team’s success. Employers can use the results on this study to examine their internal project teams to identify true team leaders. Subsequently they may wish to utilize these individuals as formal leaders for similar tasks. Additionally, employers may examine their internal teams to develop an understanding of who may be fit for leadership positions within the organization. In conclusion, emergent leaders display numerous characteristics and the combination of leadership behaviors is proven more successful than one over another.
CHAPTER 5: SUMMARY AND CONCLUSIONS

The results on this study were successful in providing perspective on how and when emergent leadership is present in virtual work teams. Throughout the process, limitations were uncovered; specifically related to time, participants, and communication. Along with limitations, the study produced recommendations for future research. Future research can expand on prior research and this study to provide a holistic view of emergent leadership in virtual teams; specifically analyzing team formations and team success/failure rates. The following section will expand on these identified limitations and areas for future research. Finally, this section will conclude with a personal statement on the importance of this study.

Limitations of Study

This study collected credible and trustworthy data for analysis, however several limitations were uncovered. The first limitation was time. Initially, the goal was to examine teams from time of conception to disbandment. While some of the groups examined had concluded their task, not all had. Time did not allow observation of groups over an extended period of time, and survey results did not elicit enough individuals to conduct a study solely on closed teams. The original goal was to complete the survey within two weeks, allowing three weeks for follow up interviews. Due to unforeseen circumstances, survey response time was shortened to a week and a half and follow up interviews were shortened to two weeks. Finally, time was a limitation because interviews had to be scheduled around the participants’ competing priorities. As a result, only 12 of the 20 contacted individuals were available for the follow up interview.
The second limitation was related to participants. First, the intention was to include more than seven individuals in the study; however the team’s purpose and individuals’ availability discontinued certain people from the study. Next, one participant from each group was interviewed for this study which allowed for only one perception to be analyzed. While the study was successful in determining effects of emergent leadership, interviewing additional team members would confirm or disconfirm perceptions. Finally, the participants’ relationship with the emergent leader (or other team members) was not discussed during the survey or follow up interviews outside the extent had they worked with individuals previously. Personal relationships may affect the assignment or perception of leadership.

The final limitation of this study was related to communication. First, all interviews were conducted via phone which did not allow any non-verbal cues. Seeing non-verbal cues can allow the interviewer to request elaboration of certain responses. Regardless, the phone interviews proved successful especially since the basis of the study was on virtual environments. Finally, outside distractions may have limited conversation as several participants were interviewed while at work.

**Future Research**

Throughout the course of reviewing literature and completing this study, areas for additional research were identified. Emergent leadership studies (in virtual environments) have been fairly limited to date; therefore, further research can be directed towards team formation, leadership characteristics, outside relationships, and team success/failure. Researching these areas would provide a holistic view of emergent leadership in virtual work teams.
First, future research should compare and contrast emergent leadership in teams with and without formal leadership establishment. Second, additional research may include teams that had and did not have an initial conversation regarding member roles, specifically if the group discussed a leader. Finally, future research should compare teams formed for a specific purpose (project/task teams) to long term teams (hierarchical in nature) to determine if emergent leadership still exists. Shuffler, Wiese, Salas, and Burke (2010) support this recommendation stating future research should analyze different team constructs and how it affects leadership perceptions. Conducting such research will provide a better understanding of the effects of team formation on leadership and team success.

Along with team formation, additional research should be completed regarding leadership characteristics in a virtual environment. Specifically, research is needed to determine if emergent leaders exhibit additional characteristics not identified in this study. As well as if a specific combination of characteristics will elicit positive or negative results. Kickul and Neuman (2000) further this recommendation, stating future research should examine the relationship of certain leadership characteristics to team effectiveness.

Next, further research should examine outside factors such as relationships between team members. For example, have team members (or certain team members) worked on multiple projects together in the past? Do they have a personal relationship/friendship? Understanding the indirect dynamic of the team will provide a complete picture of why an individual may perceive one individual as the leader.

Completing analysis on the team’s success and failure rate with an emergent leader is also recommended for future research. Specifically, as a result of this study one participant
identified an emergent leader and deemed the current status of the team a failure. Therefore, it is necessary to study both successful and unsuccessful teams to compare and contrast experiences. In summary, additional research can be conducted in several areas to provide a complete analysis of the complex team dynamic set forth by a virtual work environment.

**Conclusion**

There are three major findings as a result of this study related to emergent leadership in the virtual workplace. First, emergent leaders were perceived in teams with no formal leadership assignment, especially if member roles were not discussed. Second, the combination of specific leadership characteristics (expertise, differentiation, open dialogue) allowed for leadership identification. Last, the ability for an individual to establish differentiated relationships with team member’s resulted in emergent leadership identification as well as team success. These results were found and analyzed through survey and interview methods utilizing closed and open ended questions. The survey served to narrow down participants while the interview provided an in depth analysis of leadership and communication perceptions from the participant’s perspective. While analyzing the interview results, four themes emerged: 1) effects of team formation, 2) leadership perceptions at the beginning and end of project, 3) perceived emergent leadership characteristics, and 4) impact to team success.

The results of this study are important to the studies of communication, leadership, CMC, and virtual workplace environments. In the future, research analyzing virtual team formation, additional emergent leadership characteristics, and relationship to team success will only benefit these areas of study. These findings can be added to the literature related to CMC, virtual workplaces, emergent leadership, etc.
The results of this study work collaboratively with other similar studies to serve employers and academics in their analysis of successful virtual work teams. Over the past several years, I have had an opportunity to speak with numerous professionals about their experiences in virtual teams, including virtual classrooms and virtual workplaces. Several years ago, I was interested in understanding more about the team dynamic in the online classroom as in my personal experience; it seemed one individual always emerged as the leader even though it was never discussed by team members. As I began researching the topic, I shifted my focus to virtual work teams because of the overwhelming growth of distant work dynamics in our economy. In 2008, I had an opportunity to observe a cross-functional hybrid work team, specifically looking at the team dynamic. My observations concluded that while one individual was deemed the leader based on status, another individual emerged as the task leader. As I continued to work through my degree program and speak with colleagues, I grew to understand the need for additional research in this area.

My goal was to provide an understanding of how a person emerges as a leader, and further what effect it had on the team’s success. As a result, I am able to discuss effective leadership characteristics and team formation with colleagues, scholars, and organizations. Now that my research has concluded, I feel confident employers, employees, and scholars will be able to use my results to understand how and when their virtual teams are successful. Therefore, and in conclusion, the results can serve as a basis for decision making on team formation as organizations strive to remain competitive in the ever growing virtual work space.
References


Appendix A

Survey

Demographic Questions:

1. Please select your age group. Choices will include 1) under 22, 2) 22-31, 3) 32-41, 4) 42-51, 5) 52-61, 6) over 62 and choose not to disclose

2. Gender- Male, Female, Choose not to disclose

3. Occupation- fill in blank

4. State- drop down

5. Country- drop down

Virtual Team Questions:

6. Have you ever worked in a virtual or hybrid team, not including school/academic teams? (Virtual team is defined as geographically dispersed individuals working together to complete a project or task of some nature; hybrid teams include some or all team members will be connecting virtually).

   YES      OR      NO

7. When did you participate on this team? Team is defined as a group of individuals working together to achieve a mutual goal. (if answer is no, the survey will conclude for that individual). Choices will include 1) currently, 2) 0-6 months ago, 3) 6-12 months ago, 4) over 12 months
8. How many members were on the team? **Choices will include** 1) 3-5 people, 2) 6-8 people, 3) 9-12 people, 4) over 12 people

9. What was/is the context for the virtual team(s) you participate(d)? **Choices include** (check all that apply) 1) work, 2) community/volunteer project, 3) industry committee, 4) other- fill in blank

10. How long did the team project last? **Choices include** 1) on-going, 2) less than 2 months, 3) 3-6 months, 4) 6-9 months, 5) 9-12 months, 6) over 12 months

11. What was/is the purpose/goal of the team task? **Fill in blank answer**

12. Did the team have a pre-determined leader when the project started? **YES OR NO**

13. (If yes to question 12) How was the leader chosen? **Choices include** 1) by an outside authority, 2) by the group members, 3) assumed based on status, 4) other- fill in

14. Have you worked with the other participants previously? **Choices include**: Yes, No, **Some participants, but not all**

15. May I contact you with follow up interview questions? If so, please include name, e-mail, and/or phone number.
Appendix B

Interview Questions:

1. As confirmation, please tell me about the project task/goal.

2. How was leadership determined?
   a. Were all roles discussed within the group?
   b. When were roles discussed?
   c. Who initiated?

3. Did a differing person emerge as the group leader? (if assigned or assumed, differing, if not, did a person emerge).
   a. When did you realize this person was the true team leader?
   b. How did you know?
   c. What traits did this person exhibit?
   d. How did he/she act? How was that different than other members?
   e. Did you feel treated differently than other members?
4. How would you describe the individuals’ leadership style?

5. What were communication methods? What method(s) did the leadership chose? Was communication more frequent?

6. What was your familiarity with technology? Leader’s?

7. How would you rate the team’s success?

8. Were you happy with the experience?

9. What is the leader’s organizational status? (if known)

Appendix C

Focused Interview Results

<table>
<thead>
<tr>
<th>Category</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>P6</th>
<th>P7</th>
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<td>Type of Task</td>
<td>Training Program</td>
<td>Training Program</td>
<td>Coordination of PR Events</td>
<td>Policy Change</td>
<td>Cost Savings Initiative</td>
<td>Education Events Coordination</td>
<td>Events Coordination</td>
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<tr>
<td># of Members</td>
<td>Over 12 people</td>
<td>9-12 people</td>
<td>3-5 people</td>
<td>3-5 people</td>
<td>9-12 people</td>
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<td>6-8 people</td>
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<td>All or Hybrid?</td>
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<td>All</td>
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<td>Hybrid</td>
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<td>Hybrid</td>
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<td>Length of Team</td>
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<td>On-going (still working)</td>
<td>On-going (done)</td>
<td>On-going (done)</td>
<td>On-going (still working)</td>
<td>On-going (done)</td>
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<td>Type of Team</td>
<td>Hierarchal</td>
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<td>Peers</td>
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<td>Cross-Functional</td>
<td>Peers</td>
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<td>Leadership</td>
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<td>Perception</td>
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<tr>
<td>Leadership Status Prior to Assumed, because of hierarchy (C.O.)</td>
<td>Assumed, because highest in hierarchy</td>
<td>Assumed (serving as consultant)</td>
<td>No</td>
<td>No (team put together by outside authority)</td>
<td>Yes (chairperson)</td>
<td>Yes by authority</td>
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<td>Group Roles Discussed</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes, voted on by committee</td>
<td>No</td>
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<tr>
<td>Emergent Leader? When Emerged?</td>
<td>Yes, after approximately 6 meetings</td>
<td>Yes, after 2-3 meetings (when progress began)</td>
<td>Yes, first meeting</td>
<td>Shared Leadership</td>
<td>Yes (2), after 3-4 meetings</td>
<td>Yes, after 4-5 meetings</td>
<td>Yes, after 2 weeks and 3 meetings</td>
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<tr>
<td>E.L.'s Status</td>
<td>Operations (Corporal)</td>
<td>Manager</td>
<td>Consultant</td>
<td>N/A</td>
<td>Manager</td>
<td>Secretary (to the leader)</td>
<td>V.P.</td>
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<td>Emergent Leader Characteristics</td>
<td>Task Expert</td>
<td>Task Expert</td>
<td>Task Expert</td>
<td>N/A</td>
<td>Differentiation</td>
<td>Task Expert</td>
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<td>Learn</td>
<td>Encouragement</td>
<td>Advanced Technology Use</td>
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<td>Willingness to Learn</td>
<td>Organized</td>
<td>Team Success</td>
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<tr>
<td>Experience with VT’s/Technology</td>
<td>Extensive (both)</td>
<td>Non-issue; not advanced use needed</td>
<td>Non-issue; not advanced use needed</td>
<td>N/A</td>
<td>Extensive (all members)</td>
<td>Non-issue; not advanced use needed</td>
<td>Non-issue; not advanced use needed</td>
</tr>
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<td>Changes in Leadership?</td>
<td>Not once E.L. identified</td>
<td>Not at this point</td>
<td>Not at this point</td>
<td>N/A</td>
<td>Not yet (expected)</td>
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<td>Success</td>
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