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What Kind of Student Leads?

A Social Network Perspective on Leader Emergence in Student Group Projects

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Abstract

With the increase in teamwork within organizations, interest in the impact of leader behavior on group performance has surged. Yet, research on how people learn to work in teams is lacking. The thesis addresses this gap in the literature by examining what *kind* of student leads by looking at both individual characteristics and perception of teammates.

This research analyzes data on students' characteristics and team member perceptions collected at multiple time periods from undergraduate students across three courses participating in group projects. Using social network analytic techniques, I was interested in determining how different individual traits such as personality, past experience, and attitudes toward teamwork predict leadership emergence, as measured by leadership network centrality scores, and change in network centrality over time. This research contributes to a better understanding of student leaders so we can prepare students improve relevant leadership skills in the workplace.

Leadership Emergence in Teams

Leadership is an ever-growing field of literature that has received much attention for decades (Avolio, Walumbwa & Weber, 2009), especially given the increase of teamwork within organizations (Schaubroeck & Cha, 2007). There are innumerable ways to investigate leadership because of its all-encompassing and generalizable nature as well as the different types and interpretations of the terminology (Stone, 2018). This thesis focuses on the characteristics that lead someone to emerge as a team leader.

There have been many studies that present key determinants of leadership found within corporations and institutions. For example, Mumford, Zacarro, Harding, Jacobs, and Fleishman's widely cited review (2000) provides an overview of vital 21st century leadership qualities including flexibility in behavior, great interpersonal skills, and effective coaching and communication. Likewise, Mumford, Todd, Higgs, and McIntosh's (2017) study highlights specific cognitive skills such as creative thinking and idea evaluation that directly correlate with effective leadership performance. The consensus among these studies is that there is not only one, but many leadership traits that can make someone a valuable leader.

There have also been many studies that have looked at the relationship between leadership traits and leadership emergence. A study that investigated multicultural groups found that cultural intelligence and openness to cultural diversity associates with leadership emergence (Mehra, Smith, Dixon, & Robertson, 2006). Another study found dominant determinants of emergent leadership to be general intelligence, personality traits, and emotional responses (Lisak & Erez, 2014). A longitudinal study conducted across a twelve-year span found that a potent relationship between "adolescent extraversion and adult workplace leader emergence" existed (Reichard, Riggio, Guerin, Oliver, & Gottfriend, 2011, pg. 471). The same study also found that

early intelligence and personality of teenagers could be used to predict their future emergent leadership qualities. Another study looked at how group members that emerge as leaders were usually the ones who exerted “greater influence, attraction, and leadership effectiveness” (Luria, Kahana, Goldenberg, & Noam, 2019, pg. 571).

The majority of leadership research has focused on characteristics of leaders that influenced the dynamic and output of the teams (Mehra, Smith, Dixon, & Robertson, 2006). Less attention has been focused on the reverse, the extent and contribution to which such qualities and attributes affect the perception of members of a team to view someone as a leader. The thesis aims to bridge the gap in literature and investigate how the perception of leadership can be affected by different characteristics. Thus, the thesis will contribute to the growing literature on student leaders and advise ways on how to teach and implement effective team leadership skills. These findings will further suggest experiences that students should have to prepare in leading teams.

Active Participation and Leadership

Active participation has been shown to be an important determinant in who is seen as a team leader. For instance, Birkenholz and Schumacher (1994) found that being involved in an organization in college, such as professional or honorary fraternities and student government agencies were crucial indicators of perceived leadership. Another later study also found that college students who were actively involved in their courses and extracurricular activities had more leadership positions compared to students who were less involved (Shertzer & Schuh, 2004). Furthermore, students who were more engaged in activities had a better understanding of themselves, allowing them to effectively strategize their job search processes (Ewing, Bruce, &

Ricketts, 2009). These previous studies altogether show how participation in activities has a transcending impact beyond themselves (Ewing et al., 2009). In other words, actively participating college students tended to be leaders who continued to advance or develop their potentiality to grow as a leader. With supporting evidence of the importance of active participation, I hypothesize that students who are seen as active contributors to their groups will be perceived as leaders.

Technical Expertise and Leadership

Another trait worthy of investigating is technical expertise, or the knowledge and abilities relevant to a particular task or position. Technical skills can mean different things in different work settings. It can be specialized or task-related knowledge and skills or personal aspects including individual values and attitudes that underlie the work (Maduka, Edwards, Greenwood, Osborne, Babatunde, 2017). Competency or technical expertise is a pertinent characteristic of a leader because it demonstrates relevant skills and abilities that directly affect the effectiveness of group performance (Maduka et al, 2017). Leaders' technical expertise helps with building trust and leading others with care and efficiency (Tubss & Schulz, 2006). As the authors of a study quotes, "there is no more important task with regard to leadership than identifying the competencies that comprise a leader" (Tubbs & Schulz, 2006, pg. 29).

There have been many studies that have investigated the contributions of skills, knowledge, and expertise that allow a person to be perceived as a leader in a group. A study found that providing technical expertise to teachers in urban, high-poverty schools allowed them to develop professional resilience and opportunities to grow as leaders (Yonezawa, Jones, Singer, 2011). Another study found that team leaders that communicated and worked in the

virtual world of information and communication technology had to have competencies such as operational coordinating and conflict resolution ability for effective virtual leadership and the overall success of the group (Hossein, 2012). The researchers also found that leaders lacking in specific leadership competencies were usually not valuable leaders and yielded poor performance (Hossein, 2012). Results of another study also indicated that leaders in multinational teams must be cross-culturally competent to convey pertinent knowledge within the team and beyond (Hajro & Pudelko, 2010). Another study stated how leaders bear a crucial relationship with competencies to lead people, drive results, and construct the foundation of the group (Overby & Suvanujasiri, 2012). In fact, a great leader should be able to exhibit all of these competencies (Overby & Suvanujasiri, 2012).

Based on these previous studies, I hypothesize that students who are seen as contributing important task knowledge to their group's work will be perceived as leaders of the group.

Creativity and Leadership

Creativity has been widely regarded as one of the most pertinent skills that a leader must possess (Vessy, Barrett, Mumford, Johnson, & Litwiller, 2014). Creativity refers to the construction of new and practical ideas (Zhang & Bartol, 2010). It is about advancing genuine change or creating something that has never been thought of before (Harding, 2010). Leaders, people who spark change, catalyze their creativity to reevaluate outdated approaches and bring about favorable changes (Harding, 2010).

There have been numerous studies written about the importance of creativity on leadership with most of the research on creativity examining the effects of a leader's creativity. For instance, Zhang and Bartol (2010) in their study showed how empowering leadership could

have a positive effect on creativity. Furthermore, a more recent study investigated the popular notion of how transformational leadership could enhance creativity (Herrmann & Felfe, 2014). The researchers suggested how leaders should employ creativity techniques to stimulate job efficacy of their employees. Also, there has been an experiment that shows that leaders with creative problem-solving skills allowed their team to maintain competitive advantage (Reiter-Palmon, Roni, & Illies, 2014). Another relevant study investigated entrepreneurial leadership and found that entrepreneurs who were proactive were able to stimulate team member's creativity (Chen, 2007).

Yet, despite the numerous studies that have looked into the impact of leaders on creativity, not much research has been done in reverse. In other words, there is a lack of research on the impact of individuals' creativity on leadership emergence, that is, how a person's creativity affects their emergence as a leader. The major reviews of the literature on creativity and leadership focus on impact of leader creativity, but studies in this area have rarely considered how creativity impacts leadership perception. One exception is research conducted by Mueller, Goncalo & Kamdar (2010). In three studies they found a negative relationship between the expression of creative ideas and perceptions of leadership potential. In their first study, conducted by survey in a multinational company, raters gave individuals who expressed creative ideas relatively low scores on measures of leadership potential. Their second study was an experiment in which people were randomly assigned to pitch creative vs. merely useful ideas to an audience. The audience rated the people in the creative idea condition as lower leadership potential than were people in the useful idea condition. A third experiment showed that when raters were primed to expect creativity, they gave higher leadership potential ratings.

However, since this entire study was conducted in a short time frame and was based on experiments rather than real-life scenarios, the findings of this study cannot be used to presume the outcomes of the thesis. With a myriad of literature that has looked into the positive effects of creativity on leaders, I will investigate how the perceptions of a person's creativity positively affects the perception of that person as a leader. I hypothesize that students who are perceived as contributing creativity will be perceived as leaders of the group.

Personality Traits and Leadership

According to the generally accepted definition, personality is the combination of characteristics and qualities that form someone's distinctive character (Judge, Higgins, Thoresen, & Barrick, 1999). Personality traits are distinct and unique to an individual. Many studies in the past have shown how personality can be a predictor of effective teamwork, student's academic motivation and achievement, and even career success across the lifespan (O'Neill & Kline, 2008). A well-cited study indicates that there is, in fact, a well-established relationship between personality and team leadership, that individuals in a group are "socially attracted" or perceive someone as leader with a "charismatic leadership personality." (Hogg, 2001, pg.184).

The Big Five Personality Traits are the most commonly applied model in research on groups and organizations (Hogg, 2001). A qualitative and quantitative review found that the five-factor model had a 0.48 correlation with leadership, indicating strong support for the "leader trait perspective when traits are organized according to the five-factor model" (Judge, Bono, Ilies, & Gerhardt, 2002, pg. 765). The five traits are as of the following: Openness, conscientiousness, extraversion, agreeableness, neuroticism. My thesis examines how well individual factors such as these personality traits predict leadership emergence over time. I focus on two of the traits,

extraversion and conscientiousness, which are the strongest correlates of leadership amongst the five traits (Judge et al., 2002).

Extraversion and Leadership

Research has shown extraversion to be the strongest Big Five personality predictor of leadership (Do & Minbashian, 2014). Extraversion is considered a "higher-order factor in every major taxonomy of personality" (Digman, 1997, pg. 1246). It predicts how likely someone would emerge as a leader and also how effective they would be as a leader (Judge et al., 2002). Many college students in an interview indicated that they believed there was a certain personality type favored for leadership: Extraversion. In fact, the study also found that student leaders tended to be more extroverted while those who were detached were more introverted (Freeman, 2004). According to college student perceptions of leadership, many perceive extroverted individuals as natural leaders, the ones who are outgoing and seen as more charismatic by nature (Freeman, 2004). Another study showed that individuals high in extraversion were the most goal-oriented in a student group project (Payne, Youngcourt, & Beaubien, 2007). These studies indicated broader implications for student leaders who must lead in the presence of a group of individuals. Based on these previous findings, I predict that those who are extraverted in personality will become more central over time, predicting an increase in leadership centrality.

Conscientiousness and Leadership

Conscientiousness has always been portrayed as one of the most robust personality predictors of performance over the last couple of years. Meta-analytic studies have often indicated conscientiousness being the most "generalizable Big Five predictor of leadership

performance" (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009, pg. 370). Conscientious individuals refer to the ones who think before acting, prioritize, and follow the norms and rules that enhance task performance (Roberts et al., 2009). Interestingly, previous research has suggested that these individuals were more likely to possess technical expertise (John & Srivastava, 1999).

Past literature has coupled conscientiousness and extraversion together, calling people with both personality traits as high-conscious extroverts (Witt, 2002). A study found that high-conscientious, high-extraversion individuals, were persistent, competitive, vigorous, and active leaders (Witt, 2002). These individuals were more likely to be successful in job interviews and also valuable in jobs that required leadership and interpersonal skills in client-facing positions. On the other hand, low-conscious introverts, those low in both conscientiousness and extraversion were seen to be inactive, inefficient, apathetic, and passive (Witt, 2002). They were less likely to be successful in more noncommittal when assigned to leading positions. With literature that investigates the positive relationship between extraversion and conscientiousness in both job performance and leadership, I also predict that those who are conscientious in personality will become more central *over time*, predicting an increase in leadership centrality.

Leadership and Network Centrality

There has been a general consensus among literature that a relationship between centrality and leadership exists (Mullen & Salas, 1991). Individuals perceive leaders as those who are able to exercise power and are willing to attribute characteristics. The network characteristic most closely associated with leadership in teams is centrality. Centrality is the characteristic of the prominence individual nodes in a network, indicated by the number of

connections (Freeman, 1978). It is associated with the perception of leadership and also personal satisfaction of group members (Freeman, 1978).

In network research, leadership is often equated with leadership for more central individuals are perceived as powerful and are more likely to take on leadership positions (Bass, 1990). For example, a meta-analysis found that individuals with high centrality measures were recognized as leaders by others in the same network (Mullen & Salas, 1991). This was because those high in centrality tended to assist more in coordinating activities and distributing information in the organization. In fact, more central individuals in organizations tended to be perceived as leaders (Balkundi & Kilduff, 2006). Perceptions about leadership and leadership emergence change depending on centrality.

I chose to look at indegree centrality because it best captures the idea of how strongly a person is perceived as a leader in the team unlike betweenness and closeness. The two other measures focus on aspects of the links between the nodes, yet I only need to understand and investigate the presence or absence of a link. Indegree centrality will serve as an important measure that will answer the question of how well network centrality predicts leadership compared to other individual characteristics.

Leadership and Social Network Analysis

The roots of social network analysis trace back to the early 20th century. The conventional form of social science research then, as Columbia University professor Allen Barton describes in his book, was "tearing the individual from his social context and guaranteeing that nobody in the study interacts with anyone else in it" (Freeman, 2004, p. 1). In fact, research until then was dominated by sample surveys as researchers detached individuals

from their social context and recorded their behaviors rather than trying to understand their actions in their social circles, communities, and groups. Yet, the trend of SNA literature has changed as the majority of research now shows how vital it is to investigate interactions and links that individuals form because social ties have important consequences for people affiliated in any type of group (Freeman, 2004).

Within the past decade, many small group researchers have shifted their attention to SNA practices. In fact, there is a long history of research that has utilized social network techniques to comprehend the role of leadership in teams (Mehra, Smith, Dixon, & Robertson, 2006). For instance, Espinosa and Clark, (2014) indicated how they could better understand the correlation between team performance and member expertise by utilizing an SNA analysis. Sarker, Ahuja, Sarker, and Kirkeby, (2011), in their study also showed how the relationship between performance and trust in a virtual team could be better examined through a social network perspective compared to an individual level approach. Furthermore, Rienties, Alcott, and Jindal-Snape, (2014) similarly utilized SNA to look at performances of self-selected and assigned student teams.

Rienties et al. (2014) conducted a study to compare the effects of student-selected versus assigned team member participation. Using the social network approach, they found that randomly assigned groups developed equally tight internal group relations as self-selected group members. Another study by Hommes, Rienties, Bos, Scherpbier, and Schuwirth (2012) looked at the learning and various affective outcomes of student's social networks. From these networks, they were able to find that social interaction was strongly associated with students' learning and proposed the need to focus on the interactions that happened outside the classroom setting to improve student learning (Hommes et al., 2012). There has also been evidence in support of the

network approach, illustrating the advantage of using SNA to comprehend the link between interpersonal trust and performance (Sarker, Ahuja, Sarker, & Kirkeby, 2011). In my thesis, SNA offers a contribution by providing a new perspective not commonly seen in the literature on student team leadership. These studies are indicative of the growing literature on the networks in small groups from samples of student teams working on projects together (McLeod, 2019).

While there has been much research on individual differences and distinguishing characteristics of leaders (Friedrich, Griffith, & Mumford, 2015), the SNA perspective has been increasingly applied across social sciences and the study of small groups (Borgatti, Mehra, Brass, & Labianca, 2009). SNA is a promising perspective for examining leadership in teams because it looks at both individual characteristics and team members' perception and the relationship between the two approaches.

The individual level and network level perspectives are two possible ways to examine and measure leadership. Traditional social psychological research in social sciences in the past tended to focus on individual-level approaches such as personality, attitudes, past experiences, and other individual constructs (Freeman, 2004). Certain disciplinary approaches have shown to focus on one perspective over the other. For instance, small group research has been dominated by psychological approaches, concentrated on the individual, whereas SNA has tended to come from a more sociological tradition (McLeod, 2019). Social network analysis (SNA) focuses on social ties and bonds that the individual has within the community. It looks into the social aspect of research or the interactions and influences that the individual has with the surrounding.

While both methods have been extensively used to study the groups and individuals, the relationship between network properties and individual characteristics have received less attention (McLeod, 2019). The present study fills in this gap of literature and address the

relationship between these two perspectives. The study focuses on the perceptions that group members have that distinguishes someone as a leader and also on the specific traits and qualities that the leading person already possesses. Furthermore, by looking at the relationship and comparing the individual and network analysis technique to each other, I suggest an effective approach to investigating characteristics like leadership.

Method

Data Set

A sample of 69 student teams at Cornell University from courses in three disciplines was collected by the Group and Interpersonal Communication Research (GRIP) Lab. Network data that measures perceptions of leadership and character attributes were collected from a total of semester-long group projects in the communication, food-science, and fashion design and management departments at Cornell University. Respectively, there are 15, 50, and 14 teams in each of the courses, ranging from six to thirteen students per team. The total of 465 students consists of 137 male and 328 female students ranging in age from 17 to 37. These 69 student groups worked on a project for an entire semester that demanded original creative output that was worth a considerable amount of their grade. These tasks had a “high degree of importance, uncertainty, and complexity” (McLeod, 2019).

Course and Project Description

Communication

The communication course was a sophomore-level class with students from other majors and class years. It was a fairly large class, 120 students, attracting non-communication majors

because it fulfilled distribution requirements. The team project required students to "design and conduct an original field research project that applied materials covered in the course" (McLeod, 2019). Team members were selected by the course instructor who looked over the list of research topics that individual students were interested in. Each team was composed of around five to six students and had at least one student who took the research method communication course so they could assist the team. Students were graded for their oral presentation and written paper which composed of 25% of their entire grade.

Food Science

The food science course was a freshman-level course for students who were interested but needed no prior knowledge about the subject. The course was not required for the major and had students from different subject areas. The project required students to develop novel and original ice cream flavors according to a specific theme. Once, the theme of the year was the "U.S. Presidential election and students were to develop an ice cream which matched the concept" (MeLeod, 2019). The ingredients and manufacturing process and costs had to be taken into account. Students were assigned into teams of eight to thirteen people with no specific criteria for group size but only according to their scheduling logistics. The ice cream was judged by a "panel of faculty and industry representatives using a multi-dimensional rating system developed by the course instructors" making up 35% of the final course grade (McLeod, 2019).

Fashion Design & Management

The fashion design & management course was a sophomore-level class that was mandatory for the major. Thus, enrollment is predominated by students majoring in fashion

design. Teams were self-selected, limited to the size of five to six members. The project required students to develop a fashion product line in a pop-up store and were to think of ways to market the product. Students had to hand in information based on "market analyses, product manufacturing processing and costs, and a visual representation of the pop-up store and merchandise line" (McLeod, 2019). They also had to design and present the poster of their own pop-up store towards the end of the semester at their annual show. Students were graded on these final products and interim deliverables which made up 60% of their final grade.

Survey Measures

Prior to the start of the projects, background data on students were collected by survey. The first set of surveys consisted of data including demographic measures, past experiences related to the team's project and with teamwork, attitudes toward teamwork, ratings of self-efficacy related to project success, and Big Five personality measures.

Another set of surveys were given out during the course of the projects and another after the project was handed in before receiving grades. These surveys contained identical measures. There were six sociometric questions that each member of the team had to rate each other on. All student team members rated all team members on six sociometric questions: *Leadership, creativity, technical expertise, and general activity*. With this survey data, the fundamental basis of the question will be answered: What *kind* of student leads?

Data Analysis Techniques

To yield explanations about student perceptions on the kind of student that leads, social network analysis (SNA) was to be used. I intended to apply SNA techniques to calculate network

statistics and use ordinary least squares (OLS) and quadratic assignment procedure (QAP) regression techniques to examine individual and network-level predictors of leadership emergence. The differences in responses over time would depict a change in centrality. Here, the network definition of centrality is the extent to which people gave the person a leadership nomination. **p**Indegree centrality would help me see how leadership centrality changes from time 2 to time 3 and identify the predictors of these changes. After examining which indicators most strongly predict indegree centrality, I then would be able to examine whether predictors of leadership centrality differ by course subject.

Discussion

Expectations

I have always strived for leadership positions for many student organizations at Cornell. I wanted these leading positions to create meaningful impact and to have a larger say in what I was passionate about. In fall 2019, I established the world's largest university-based student consultancy branch, 180 Degrees Consulting at Cornell, and led the entire team as President & Co-Founder. 180 Degrees Consulting operates in over 35 countries and is established in over 150 universities (180dc.org). Thus, I have genuinely been interested to look into how students like me, would emerge as a leader over time from the point of view of other team members.

Initially, without having done any literature reviews and just purely from experience, I expected two factors; active participation and extraversion would be related to leadership. I strongly believed that students who were extraverted and were perceived as actively contributing would be perceived as leaders of the group. I had seen leaders of various student organizations such as Cornell University Class Councils representatives and presidents of a cappella groups

who were always on top of their work and seemed excited to talk and lead the group. Yet, the more conversations I had with my thesis advisor Professor McLeod, and the more studies I began to read, I realized that leadership was more complicated than I had expected and that there were many more contributing factors to making someone being perceived as a leader.

Narrowing down on the many factors that researchers cited in various studies, I decided to investigate active participation, technical expertise, creativity, and even personality traits such as extraversion and conscientiousness. This was more than double the amount of the factors that I had initially believed were most relevant in perceiving leadership.

The Research Process

Succinctly, my research process can be described as a roller coaster ride. It was hard to stay on track all the time and look specifically into leadership in student teams because most of the literature reviews on leadership were held in corporate settings. It was tempting yet, in the end, ineffective for me to cite a myriad of reviews with a focus in the workplace. Since I had to work with the data on Cornell student team projects, I had to focus on student teams. Furthermore, it was extremely difficult to find literature that supported the reasoning behind my hypotheses. Even if I had obtained literature that found that those who were perceived as contributing creativity were perceived as leaders, I could not take the findings for granted and had to ask questions: Is the workplace setting the same as the student team settings? If not, what are the differences? Are these differences too large for me to imply the same outcome for student teams?

To figure out a way to stay on the right path, I had meetings with the librarians to focus my key search words on different online databases such as the Web of Science and PsycNet. By

narrowing down on my search terms, I was able to expedite my research process and yield more literature results specific to what I was looking for. It was satisfying to not only learn about my thesis topic but also to attain relevant research skills that I would be able to utilize for my future studies.

Some of my most powerful learning moments occurred when I found a literature review that went against my hypothesis about creativity. There was one literature review by Mueller, Goncalo & Kamdar (2010) in their three studies where they found a negative relationship between the expression of creative ideas and perceptions of leadership potential. Though I was initially taken aback and terrified because of this contradictory finding, it gave me a chance to dig deeper into what was lacking and worthy of critique in the literature. These were experiments done in a short time frame unlike my data that was collected in real group projects in three subjects that were compiled over the course of a year. By figuring out these discrepancies in the literature reviews, I believe I was not only able to find support and reasoning behind my hypotheses with literature, but also mature as a reader and critic.

The Link Between Leadership in the Classroom and in the Workplace

In general, data on teamwork skill learning is pretty scant, and there is even less work specifically on the teaching of team leadership (McLeod, 2019). One of the challenges of teaching leadership is persuading students to think outside their pre-established ideas and ideologies of what leadership is (Cunliffe, 2009). The trend with literature that deals with teaching leadership seems to be to about rethinking and reestablishing the norms that surround leadership and also to state that conventional leadership theories are ineffective because they cannot be practiced (Hay & Hodgkinson, 2006). It is important to investigate the student network

and relationships that members have with one another to discuss *how* students learn to work and lead teams. And from the characteristics that show to be more prominent among student leaders, I can then extrapolate and suggest actions that will improve leadership.

A study finds that teams in the workplace are, in fact, a resemblance of student teams, emphasizing the importance to train students to be successful future leaders (Thacker & Yost, 2002). Researchers Thacker and Yost collected questionnaire data from over 300 undergraduate and graduate students and found that leader trustworthiness was related to overall team satisfaction. The study emphasized the importance of good communication skills of student leaders and also proposed ways to train these student leaders to become effective workers in the real world. For example, they found that incentivizing student leaders to be more assertive and to use supportive language by awarding them extra credit points would increase group performance and overall team satisfaction level. I believe that my data would have been able to support whether or not training methods like those suggested by Thacker and Yost (2002) were effective and useful for improving overall team performance.

My thesis would have looked into how people learn to work in teams by examining what kind of student leads by looking at both individual characteristics and perception of teammates. Though I was unable to analyze the student data, I have learned that there are many different individual traits such as past experience, personality, and attitudes toward teamwork that predict leadership emergence. By conducting an analysis on these characteristics, the thesis aimed to contribute to a deeper understanding of student leaders to better prepare students improve relevant leadership skills in the workplace. Thus, future research should look into the dominant qualities that enable someone to emerge as a leader to suggest recommendations for practice in student team settings.

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