

A MIXED METHODS STUDY ON ROLE OF LEADERSHIP IN DEVELOPING A
COLLABORATIVE CULTURE AS PERCEIVED BY EMPLOYEES

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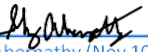
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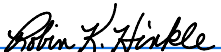
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Abstract

Organizations rely on their employees to collaborate to achieve their strategic goals. This study identified the critical leadership characteristics for creating a collaborative culture from employees' perspectives. There is limited literature on employee perspectives regarding the leadership characteristics essential to creating a collaborative culture. The study used a mixed-methods exploratory sequential design, soliciting participants from a public agency to identify the critical leadership characteristics necessary to create a collaborative culture to assist in allocating limited resources.

The overarching research question was, "What are the key leadership characteristics for leaders in developing a collaborative culture in a small public water agency from the employees' perspective?" The researcher utilized a qualitative survey instrument, structured interviews with managers, and a quantitative survey requesting employees to rank critical leadership characteristics. The qualitative and quantitative surveys focused on managerial and non-managerial employees at the research site. The structured interviews were with managerial employees.

This study was limited to one organization, but it will be helpful for other organizations to understand how their leaders can create a collaborative culture and allocate their resources effectively. The study fills the gap in the literature on employee perspectives regarding the leadership characteristics essential to developing a collaborative culture. The findings provide insight to leaders on their role in building a collaborative culture from the employees' perspective.

Keywords: Collaboration theory, collaboration framework, organizational culture, trust, engagement, decision-making, collaboration, leadership

Dedication

I want to dedicate this dissertation to the most important people to me. First, to my grandmother, Bernice Ebright (October 1907–May 2008), and grandfather, Harold Ebright (1906–1996), who provided stability and love and encouraged my desire to learn, grow, and travel without you, I would not achieve all that I have. Second, to my mother, Barbara Harkonen (1939–2006), and my father, Duane Kerr (May 1938–December 1973), who taught me to work hard, chase my dreams, and be resilient. Third, to my husband, Jerome Maurer, and sons, Brandon and Jonathan Maurer, for your love, support, and understanding as I pursued this degree. To my son, Dr. Jeremy M. Kerr, for reminding me that knowledge is beautiful, the ability to cross the finish line is remarkable, and that I was still able to achieve my dreams late in life. To my sister, Karen Bernard, for reviewing and providing feedback on my assignments and dissertation to remind me that it is okay to ask for help from my younger sister because she provides exceptional input. To my brother, Keith Kerr, for being there and reminding me to have fun. To Terri Daly, for her support and encouragement during my doctoral journey. To Raven Valencia, my profound thanks to you for holding space for me during this transformational journey as I pursued my doctorate and spiritual awakening; without you, I would not have understood the interconnectedness between the two journeys. To Ray Valencia, Jack Valencia, and Rich Maestas, thank you for playing golf with me and Jerry to allow me to enjoy nature as I hit that small ball too often during my time away from my research and computer. Thank you to everyone for your support, encouragement, and understanding as I fulfilled my dream to obtain my doctorate.

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CHAPTER 1: INTRODUCTION

Organizations have limited resources to deploy for achieving their strategic initiatives and must allocate these efficiently (Burger et al., 2019; Maritan & Lee, 2017b). Internal politics, communication, and lack of coordination can negatively affect an organization's ability to allocate resources to implement its strategy and achieve its strategic objectives (A. A. Ali, 2016; Augier, 2013; Du et al., 2019). Organizations may struggle to allocate resources, and competing initiatives impact daily operations (Beyerlein et al., 2006; Maritan & Lee, 2017a; Petro et al., 2020). Organizations that ensure alignment with their strategic plan and collaboration between business units and teams can allocate resources and deliver on their goals (Burger et al., 2019; Painter et al., 2019). Communication, knowledge exchange, and cross-functional teams enhance collaboration to facilitate resource allocation and reduce the risk of overextending resources (Ershadi et al., 2020; Perkmann, 2017).

The current literature on collaboration within an organization focuses on team collaboration (Hu et al., 2022), interorganization collaboration (C. R. Parker, 2020), education (Gajda & Koliba, 2007; Wightman et al., 2020), collaboration in research (Calancie et al., 2021), intra-organizational collaboration for innovation (Fanousse et al., 2021), and communities of practice (Gajda & Koliba, 2007; Valaitis et al., 2018). However, research is lacking in employee perceptions of creating a collaborative culture to assist with allocating personnel resources within an organization (Valaitis et al., 2018). There is a need to understand employees' perceptions of how leaders can create a collaborative culture to allocate limited personnel resources.

Collaboration has been described by Lewis et al. (2010) as involving "cooperation, coordination, and exchange of resources (e.g., people, funding, information, ideas)," and "mutual respect for individual goals and/or joint goals" (p. 462). Collaboration, cooperation, and

coordination may transpire between individuals, teams, the organization, or strategic external partners (Bond-Barnard et al., 2018). In his seminal work, Barnard (1938) discussed coordination and cooperation in conjunction with the organization in establishing the need for the executives to set the vision and empower the employees to make decisions so they work together to make the best decisions and that the executives need to trust those who do the work. Beyerlein et al. (2006) defined collaboration as “high-quality social interaction in the network” (p. xiii). Beyerlein and colleagues also discussed how isolation within an organization creates silos that limit sharing and feedback is nonexistent, along with an inability to capitalize on available resources. The current study defines *collaboration* as when teams, individuals, or organizations work together to achieve their goals.

The current study explored a public agency’s dynamics involving intra-organizational collaboration and personnel resource allocation strategies for achieving its strategic objectives. Specifically, the research focused on examining the critical leadership characteristics for creating a collaborative culture to assist the organization with allocating its limited resources. The study collected the public agency’s employees’ perceptions of these critical leadership characteristics.

The current research identified critical leadership characteristics from employees’ perceptions of collaborating within the organization while aligning initiatives and allocating resources through a collaboration theory lens, which Gray (1985) introduced in her seminal work and Wood and Gray refined (1991). The definition of collaboration theory continues to evolve (Bedwell et al., 2012). Bedwell et al. (2012) identified the collaboration performance framework, which focuses on process and can apply to intra-team, intra-organization, and inter-team collaboration.

Fanousse et al. (2021) developed a multidimensional conceptualization of intra-organizational collaboration to reduce uncertainties in innovation projects and enhance performance. The dimensions of intra-organizational collaboration (Fanousse et al., 2021) are collaborative relationships, collaborative leadership, information sharing, trust formation, and joint decision making (see Table 1).

Table 1

Intra-Organizational Dimensions

Dimension	Explanation
Collaborative relationship	Intra-organizational relationship that involves knowledge transfer, integrating resources, and information exchange within the organization
Collaborative leadership	Executive management supporting and leading collaboration and innovation consistently
Communicating and sharing information	Intra-organizational information transfer by gathering inputs into a solid and coherent output
Trust formation	Intra-organizational knowledge sharing and understanding developed over time based on the members interactions
Joint decision making	Intra-organizational making critical decisions jointly

Note. Adapted from “Reducing Uncertainties in Innovation Projects Through Intra-Organizational Collaboration: A Systemic Literature Review,” by R.I. Fanousse, D. Nakandala, and Y. Lan. 2021, *International Journal of Managing Projects in Business*, 14(6), p. 1344 (<https://doi.org/10.1108/IJMPB-11-2020-0347>). Copyright by Emerald Publishing Limited.

The current study used the lens of the collaborative relationship and leadership dimensions to analyze the data. Outcomes identified for a collaborative relationship include (a) resource allocation, (b) improved information acquisition, (c) knowledge transfer among the team and into an organizational knowledge base, (d) development of ideas and knowledge, (e) effective brainstorming and collective problem-solving activities, (f) interactive conflict resolution, (g) organizational learning, (h) strong business acumen between multiple stakeholders within an organization, and (i) effective individual contribution (Fanousse et al., 2021).

Collaborative leadership outcomes entail (a) anticipating changes, (b) effective conflict management, (c) effective processes coordination and integration, (d) team management, (e) synchronized knowledge transfer among experts from various disciplines, (f) positive team synergy, (g) motivation of diverse team members toward a common goal, (h) team loyalty and commitment, and (i) enhancing project efficiency (Fanousse et al., 2021). Table 2 shows the intra-organizational dimensions and potential outcomes used to analyze the data for this study. The study focused on leadership characteristics for creating a collaborative culture to support effective allocation of an organization's limited personnel.

Table 2

Intra-Organizational Dimensions and Potential Outcomes for Data Analysis

Selected dimension and potential outcomes	
Collaborative relationship	Collaborative leadership
(1) Resources integration	(1) Anticipating change
(2) Improved information acquisition	(2) Effective conflict management
(3) Intra-team and inter-team knowledge transfer and into an organizational knowledgebase	(3) Effective process coordination and integration
(4) Idea development and knowledge	(4) Team management
(5) Effective brainstorming and collective problem solving	(5) Synchronized knowledge transfer among expertise from various disciplines
(6) Interactive conflict resolution	(6) Positive team synergy
(7) Organizational learning	(7) Motivation of diverse team members toward a common goal
(8) Strong business acumen between multiple stakeholders within an organization	(8) Team loyalty and commitment
(9) Effective individual contribution	(9) Enhancing project efficiency

Note. Adapted from “Reducing Uncertainties in Innovation Projects Through Intra-Organizational Collaboration: A Systemic Literature Review,” by R.I. Fanousse, D. Nakandala, and Y. Lan, 2021, *International Journal of Managing Projects in Business*, 14(6), p. 1346 (<https://doi.org/10.1108/IJMPB-11-2020-0347>). Copyright by Emerald Publishing Limited.

This study used intra-organizational collaboration dimensions (Fanousse et al., 2021) to evaluate the alignment between operations and resource allocation using collaboration within an organization. Alignment requires communication and understanding the perspectives of others (Burger & Pelsler, 2018; Du et al., 2019). Knowledge of the intra-organizational collaboration dimensions (Fanousse et al., 2021) may improve the decision-making process through effective communication and risk alignment (Colbry et al., 2014; Edmondson & Harvey, 2018). Bedwell et al. (2012) and Fanousse et al. (2021) identified frameworks to assist intra-organizational collaboration that enhances performance.

This research compared data collected from survey participants to the intra-organizational collaboration dimensions (Fanousse et al., 2021). Specifically, the study focused on collaborative relationships and leadership to determine whether there was a difference between intra-organizational collaboration dimensions (Fanousse et al., 2021) and the perceptions of managerial and non-managerial employees.

Background of the Study

Organizations rely on collaboration and trust to achieve their objectives (Bond-Barnard et al., 2018; Colbry et al., 2014). For an organization to fulfill its strategic goals, its employees must work together to utilize its resources effectively and efficiently (Wasilewski, 2020). However, organizations struggle with coordinating resource allocation due to competing priorities constraining their resources (Maritan & Lee, 2017b; Salem et al., 2020). The resources in an organization include human resources, funding, assets (tangible or intangible), and intellectual capital that enhance organizational performance (Karnsomdee, 2022; Maritan & Lee, 2017b). Organizations operate more efficiently when there is alignment at all levels to achieve their strategic goals and solve problems (Collins, 2013; Wasilewski, 2020; Yström et al., 2018).

Understanding how firms leverage their strategic goals and integrate operations across different elements within the organization is essential to creating synergies and efficiencies (Beyerlein et al., 2006; Maritan & Lee, 2017b).

Bottlenecks, constraints, or lack of available resources impact both strategic initiatives and daily operations (Adams & Graham, 2017; Pollanen et al., 2016). Teams within an organization may focus only on their projects and develop project schedules based on their needs without engaging other elements (e.g., finance, procurement) in setting realistic timelines and ensuring resources are available (Alves & Goncalves, 2018; Edmondson & Harvey, 2018). Teams that recognize that they are part of a larger organization while aligning their schedules with the internal processes and understanding their impact on others are more likely to deliver their project as envisioned (Yström et al., 2018). Leaders who review operations at the enterprise level understand their organization's needs, recognize when a conflict between initiatives may affect resource allocation, and efficiently deploy resources to help align operations with the strategic plan (Petro et al., 2020).

Organizational alignment is the synchronization between an organization's systems, culture, strategy, and structure to accomplish its objectives and meet stakeholders' expectations (Burger et al., 2019). *Decision making* is "the act or process of deciding something, especially with a group of people" (Merriam-Webster, n.d.). Per Spetzler et al. (2016), a decision process "should be tailored to the nature of the decision: its magnitude (quick, significant, or strategic), complexity (organizational and analytical), content challenges, and likely decision trap" (p. 32). Decision makers must make informed decisions, which requires understanding the available information, implementing the best solution, and not judging the decision by its outcome (Spetzler et al., 2016). Achieving alignment and effective decision making requires an

organization to ensure that its employees and stakeholders understand its strategic goals, collaborate, and recognize the organization's role in achieving them (Rooney, 2006; Wasilewski, 2020). The current research focused on intra-organizational collaboration within an organization to allocate human resources efficiently to accomplish an organization's objectives.

Organizations, individuals, and teams collaborate to solve complex problems and utilize resources efficiently to enhance performance (Collins, 2013; Shuffler & Carter, 2018). Organizations that are effective in collaborating implement cross-functional teams that have frequent meetings, identify and address interdependencies on projects or operations, and leverage decision making through contributions from all team members (Beyerlein et al., 2006; Perkmann, 2017). Beyerlein et al. (2006) contrasted "integration" and "collaboration" by distinguishing that collaboration produces outcomes by exploiting the team's different skills. Wood and Gray (1991) refined Gray's (1985, 1989) seminal definition of collaboration by clarifying that "collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain" (p. 146).

Developing new ideas or solving organizational problems requires exploiting organizational resources and bringing together a variety of thoughts to create the best solutions (Collins, 2013). Gray's (1989) seminal work discussed collaboration from an inter-organizational perspective, where multiple organizations work together to solve a problem in which they have a stake. Adapting the collaboration definition to an intra-organizational viewpoint shifts the focus to inter-team, inter-department, or cross-functional team collaboration to leverage the internal capabilities to innovate or solve problems (A. A. Ali, 2016; Beyerlein et al., 2006; Bond-Barnard et al., 2018). To encourage collaboration, leaders must understand how organizational decision

making is achieved through collaboration, communication, and resource allocation (Beyerlein et al., 2006; Collins, 2013; Painter et al., 2019).

An organization's resources, as Barney (1991) discussed in his seminal work, include "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (p. 101). Resources include an organization's financial, physical, human, organizational, technological, and intangible assets (Mahoney, 1995). Maritan and Lee (2017a) recognized that organizational resource allocation is complicated by political, social, and economic factors that require managers to consider the functions and levels within the organization.

In addition, Edmondson and Harvey (2018) researched cross-boundary teams, which is when a group is formed that incorporates individuals with diverse expertise to solve problems or innovate. Teams that integrate expertise from different areas, educational backgrounds, and functional areas may struggle to develop harmonious teams (Edmondson & Harvey, 2018; Van de Ven & Zahra, 2017). Mortensen and Gardner (2017) noted that team members assigned to multiple teams can negatively affect team performance due to reduced engagement and burnout. Haas and Mortensen (2016) recognized that organizational leaders must address team performance by establishing a clear direction, firm structure, supportive context, and shared mindset. Leaders must understand team dynamics, intra-team collaboration, and resource allocation (Edmondson & Harvey, 2018; Gardner, 2017; Haas & Mortensen, 2016). Therefore, understanding employees' perceptions of how leaders can create a collaborative culture to allocate limited personnel resources benefits leaders and their organizations.

Statement of the Problem

Many organizations struggle with leadership direction in building a collaborative culture to support allocation of limited resources (Franke & Foerstl, 2019; Liou, 2018). Failure to move beyond cooperation and coordination to collaboration may affect an organization's performance and lead to missed opportunities and inefficiency in allocating limited resources (Barney, 1991; Maritan & Lee, 2017a; Matinheikki et al., 2016). Organizations that fail to emphasize internal collaboration beyond the team or department level limit their ability to achieve strategic objectives (Agarwal et al., 1992; Liou, 2018; Petro et al., 2020). Employees have limited availability to allocate to initiatives and are constrained by various issues that in turn impact an organization's ability to fulfill its strategic goals (Allen et al., 2015; Pollanen et al., 2016). At the organizational level, leaders must set the tone and evaluate and deploy personnel effectively based on operational needs, which requires establishing a collaborative culture (A. A. Ali, 2016; Donelli et al., 2021; Youngs, 2017). Managers should know their personnel's availability to ensure sufficient staffing for initiatives or projects (Engwall & Jerbrant, 2003; Heravi & Faeghi, 2014; Petro et al., 2020). Hence, assigning employees to multiple teams or creating cross-functional teams can impact team performance (Mortensen & Gardner, 2017); Haas and Mortensen (2016) identified that working on different teams affects team unity, and Lewis et al. (2010) determined that allocating employees to multiple teams can affect resource allocation (Ershadi et al., 2020; Maritan & Lee, 2017b).

Further, organizations have interdependencies that affect outcomes and processes due to resource constraints and limited communication (Bond-Barnard et al., 2018). The departments or teams within an organization may pursue different objectives that interfere with another team or department fulfilling their own mission (Ershadi et al., 2020). Employees rely on leadership to

set expectations and clarify how organizational elements should work together (A. A. Ali, 2016). Organizations that fail to collaborate can restrict their ability to achieve strategic goals, resulting in inefficient allocation of resources and limited understanding of their priorities (Jain & Jain, 2013; Sabherwal et al., 2019). Collaborating at all organizational levels engages employees, develops a culture of collaboration, and improves resource allocation to meet strategic goals (A. A. Ali, 2016; Matinheikki et al., 2016; Pirju, 2018). As Valaitis and colleagues (2018) observed, there is also a need for continuous communication and refinement during the collaboration, and collaboration requires clear mandates, vision, and goals.

Purpose of the Study

The current mixed-methods exploratory sequential study—by collecting employees’ perceptions of the role of leaders—identified criteria that leadership can use to create a collaborative culture for allocating limited resources. Schoonenboom and Johnson (2017) described mixed-methods research as combining qualitative and quantitative elements to broaden and deepen the research to garner a deeper understanding and validation. In the current study, the researcher used an exploratory sequential design to collect qualitative data for analysis and used the data to inform the quantitative data collection (Schoonenboom & Johnson, 2017).

The research site was a small public water agency located in California with approximately 100 employees. The research population for the qualitative and quantitative surveys was all employees; the research population for the qualitative structured interviews was and managerial employees. The objective was to understand employees’ perceptions of the role of the organization’s leadership in creating a collaborative culture to allocate its limited resources to intra-organizational collaboration dimensions (Fanousse et al., 2021). Absent from

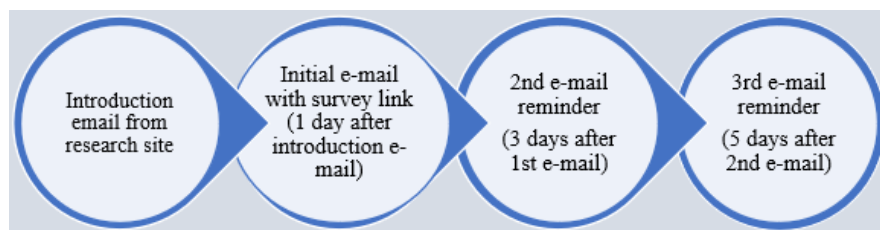
the literature are employees' perceptions of the leader's role in creating a collaborative culture in public agencies (Valaitis et al., 2018).

The current research solicited the perceptions of all employees to gather information from a diverse group, reducing the potential to identify the employees based on their responses, and bringing different perspectives on how leaders can create a collaborative culture to allocate their limited resources. The purposeful sampling strategy sought voluntary participation from the research site employees for the qualitative and quantitative surveys.

An introductory email describing the study was distributed by the research site's human resources department (see Appendix A). This was followed by an email from the researcher describing the research, which included a link to the survey and information on informed consent. No IP addresses or personally identifiable information were collected during the qualitative survey study. Two follow-up emails were sent to respondents as reminders to complete the survey. Electronic data collection assisted with analysis. Figure 1 illustrates contact with the research population for the qualitative and quantitative surveys.

Figure 1

Survey Contact Process with Population



The study used a mixed-methods exploratory sequential research design to identify the critical leadership characteristics a public agency can use to create a collaborative culture for allocating its limited resources. The researcher used a qualitative survey instrument that collected employee perceptions of the role of leaders in creating a collaborative culture to identify critical

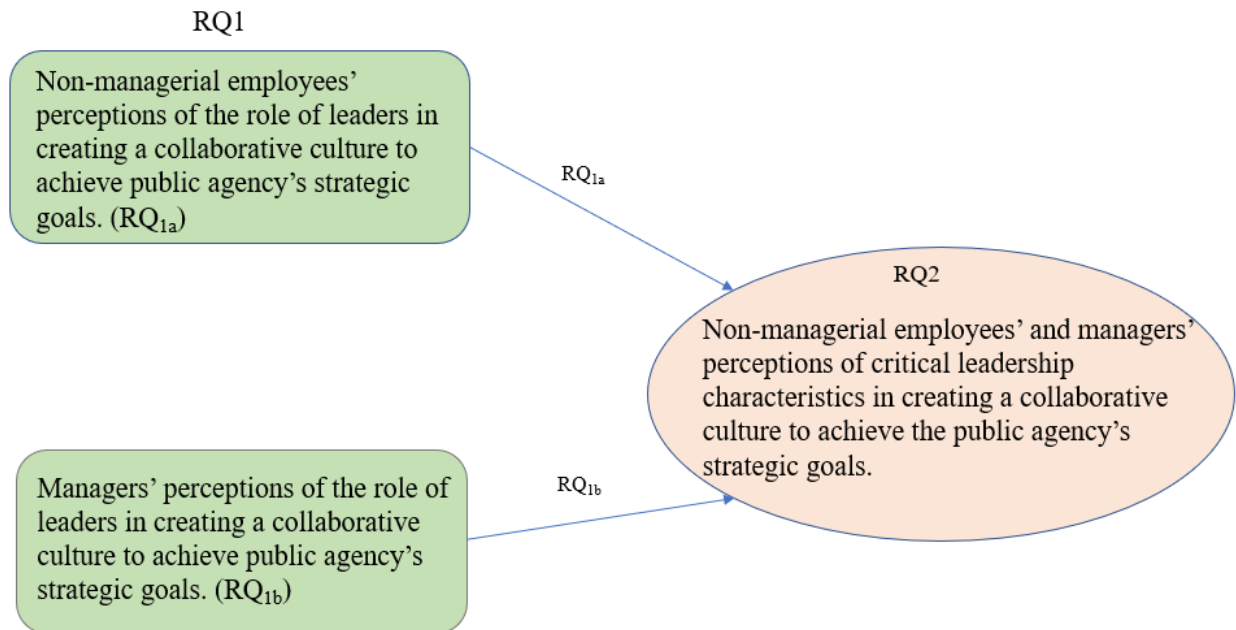
leadership characteristics. The qualitative survey data informed the development of structured interview questions and the quantitative survey instrument. The researcher conducted structured interviews with managers at the department and section levels to validate themes identified in the qualitative survey instrument and identify criteria for collaboration. A quantitative survey instrument enabled research site employees to rank elements for collaboration based on their perceptions. The qualitative data helped to identify criteria that leadership can use to create a collaborative culture for allocating limited resources based on employee perceptions of the role of leaders. The data collected from the qualitative survey instrument and structured interviews was analyzed and integrated into a quantitative survey instrument for the research site employees to rank the criteria leaders have in creating a collaborative culture to allocate resources. The quantitative data was compared to the intra-organizational collaboration dimensions (Fanousse et al., 2021) to inform the research site on criteria for developing a collaborative culture and increasing the organization's collaborative mindset.

Research Questions

The overarching research question was, “What are the key leadership characteristics for leaders in developing a collaborative culture in a small public water agency from the employees’ perspective?” The study utilized the dimensions of intra-organizational collaboration (Fanousse et al., 2021) to determine the criteria for a small public water agency to develop a mindset of intra-organizational collaboration. The research used intra-organizational collaboration dimensions (Fanousse et al., 2021) to compare employees’ perspectives on the role of leadership in creating a collaborative culture. Figure 2 presents how the qualitative and quantitative strands of data were integrated.

Figure 2

Intra-organizational Collaboration Dimensions: Collaborative Leadership and Collaborative Relationships Conceptual Framework (Fanousse et al., 2021)



Qualitative Research Questions

RQ₁: What are the participants' perceptions of the role of leaders in creating a collaborative culture in their organization?

- RQ_{1a}: What are the non-managerial employees' perceptions of the role of leaders in creating a collaborative culture in their organization?
- RQ_{1b}: What are the managers' perceptions of the role of leaders in creating a collaborative culture in their organization?

Quantitative Research Question

RQ₂: What are non-managerial employees' and managers' perceptions of critical leadership characteristics in creating a collaborative culture to achieve the public agency's strategic goals?

Qualitative Strand

The qualitative survey collected non-managerial employees' and managers' perceptions of the role of leaders in creating a collaborative culture within the organization and gathered data and demographics from the research site participants. Structured interviews with research site managers assisted with validating the themes and identifying perceptions of how leaders create a collaborative culture based on their roles. Table 3 links the research questions to the data collection instrument.

Table 3

Research Questions Aligned With Data Collection Instrument

Research question	Data collection instrument
RQ1. What are the participants' perceptions of the role of leaders in creating a collaborative culture in their organization?	Qualitative survey and qualitative structured interviews
RQ _{1a} What are the non-managerial employees' perceptions of the role of leaders in creating a collaborative culture in their organization?	
RQ _{1b} What are the managers' perceptions of the role of leaders in creating a collaborative culture in their organization?	
RQ2. What are the non-managerial employees' and managers' perceptions of critical leadership characteristics in creating a collaborative culture to achieve the public agency's strategic goals?	Quantitative survey

Quantitative Strand

The qualitative strand identified the criteria (i.e., strategies) for creating a collaborative culture as perceived by non-managerial employees and managers on the role of leadership. The quantitative survey listed the leadership characteristics identified during the qualitative strand. The quantitative survey used a rank-order scale that allowed participants to rank leadership characteristics based on their perceptions on a scale of 1 to 10 (1 = most important, 10 = least

important). Overall scores for each leadership characteristic were calculated by adding each item's rating underneath it.

Significance of the Study

The current study contributes to the limited scholarly research on employee perspectives on the leadership characteristics essential to creating a collaborative culture and allocating personnel allocation in a small public agency. The researcher analyzed the intra-organizational collaboration dimensions (Fanousse et al., 2021) of collaborative leadership and collaborative relationships that create a collaborative culture from the employees' and managers' perspectives. The literature on collaboration focuses on multiple organizations working together in the nonprofit sector (Donelli et al., 2021), education (Colbry et al., 2014), medical (Valaitis et al., 2018), and government organizations (Kramer et al., 2018), or intra-team collaboration by project teams (Bond-Barnard et al., 2018). Research on intra-organizational or inter-team collaboration within an organization is limited (Waring et al., 2020). The aim of the current study was to understand what employees and managers perceive as critical leadership characteristics in creating a collaborative culture in public agencies.

Definition of Terms

Characteristic: Characteristic is “a distinguishing trait, quality, or property” (Merriam-Webster, n.d.). For the current research, characteristics focus on a trait or quality that a leader needs to create a collaborative culture to assist with allocating resources from an employee's perspective.

Collaborate: To collaborate is “to work with another person or group in order to achieve or do something” (Merriam-Webster Dictionary, n.d.).

Collaboration: Lewis et al. (2010) described collaboration as involving “cooperation, coordination, and exchange of resources (e.g., people, funding, information, ideas),” and “mutual respect for individual goals and/or joint goals” (p. 462). Gray (1985) defined it as “a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible.” Wood and Gray (1991) broadened Gray’s (1989) definition and described collaboration as occurring “when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain” (p. 146). Bedwell et al. (2012) defined it as “an evolving process whereby two or more social entities actively and reciprocally engage in joint activities aimed at achieving at least one shared goal” (p. 3).

Collaborative leadership: Collaborative leadership is how top management supports and leads collaboration within the organization (Fanousse et al., 2021).

Collaborative relationship: Collaborative relationships focus on the team and how the team integrate the resources, exchange information, and transfer knowledge (Fanousse et al., 2021).

Collaboration performance framework: The collaboration performance framework (Bedwell et al., 2012) includes emergent states, collaborative behaviors, and contextual factors.

Collaboration theory: Collaboration theory involves stakeholders making joint decisions to solve problems. Gray (1989) described the critical elements for collaboration: “(1) the stakeholders are interdependent; (2) solutions emerge by dealing constructively with differences; (3) joint ownership of decisions are involved; (4) stakeholders assume collective responsibility for the future direction of the domain and (5) collaboration is an emergent process” (p. 227).

Communicating and sharing information: Communicating and sharing information relates to the transfer of information within the organization, specifically the collaborators, to align the necessary inputs to generate the desired output (Fanousse et al., 2021).

Criteria: Criteria comprise “a standard on which a judgment or decision may be based” (Merriam-Webster, n.d.).

Cross-functional collaboration: Cross-functional collaboration occurs when the skills and resources from different organizational elements cooperate to deliver services or products (Tsai & Hsu, 2014).

Cross-functional cooperation: Cross-functional cooperation occurs when there is regular interaction and exchange of items for value between two or more individuals or organizational entities (Ruekert & Walker, 1987).

Cross-functional team: A cross-functional team includes individuals from different departments or backgrounds who collaborate to achieve a common objective (Cui, 2015; Franke & Foerstl, 2019).

Decision making: Decision making is “the act or process of deciding something, especially with a group of people” (Merriam-Webster, n.d.).

Intra-organizational collaboration: Intra-organizational collaboration involves an organization’s internal functions working together to accomplish a task, project, or objective (Fanousse et al., 2021).

Leadership: The current study defines leadership as defining, communicating, and implementing the vision through collaboration and providing the human resources to fulfill the organization’s mission (Barnard, 1938; Metcalfe & Urwick, 2004).

Multiple team membership: Multiple team membership means that an employee is assigned to more than one team concurrently (O’Leary et al., 2012).

Multiteam systems: Mathieu et al. (2001) defined multiteam systems “as two or more teams that interface directly and independently in response to environmental contingencies toward the accomplishment of collective goals” (p. 290).

Organizational alignment: Synchronization between an organization’s systems, culture, strategy, and structure to accomplish its objectives and meet stakeholders’ expectations reflects organizational alignment. (Burger et al., 2019).

Organizational culture: The organizational culture definition used for this research is the organization’s historical practices, assumptions, and behaviors (Steinhoff et al., 2019).

Organizational strategy: Organizational strategy summarizes an organization’s activities or objectives to achieve its goals (Akpamah et al., 2021). The objectives are documented in an organization’s strategic plan and expressed in its mission and vision statements, including its goals, objectives, and strategies (Sharma & Sharma, 2022).

Resources: Resources in an organization include the availability of human resources, funding, assets (tangible or intangible), and intellectual capital that enhance organizational performance (Karnsomdee, 2022; Mahoney, 1995; Ray et al., 2003). Barney (1991), in his seminal work, defined resources as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness” (p. 101). For the current study, resources focus on the organization’s human resources and how employees’ time is allocated in the organization.

Team: A team is multiple people who work or play together to achieve a task (Merriam-Webster, n.d.). Cohen and Bailey (1997) defined a team as a group of interdependent people responsible for outcomes, seen as a subset of a larger organization that interacts across boundaries within the organization. For the current study, a team is a group within an organization that works together to achieve a task.

Assumptions and Limitations

The current study was limited to one organization, with study results intended to assist the organization in allocating resources through inter-team or intra-department collaborations by identifying critical leadership characteristics that facilitate collaboration. The study results may be helpful to other organizations by providing insights into resource allocation through intra-organizational collaboration.

Summary

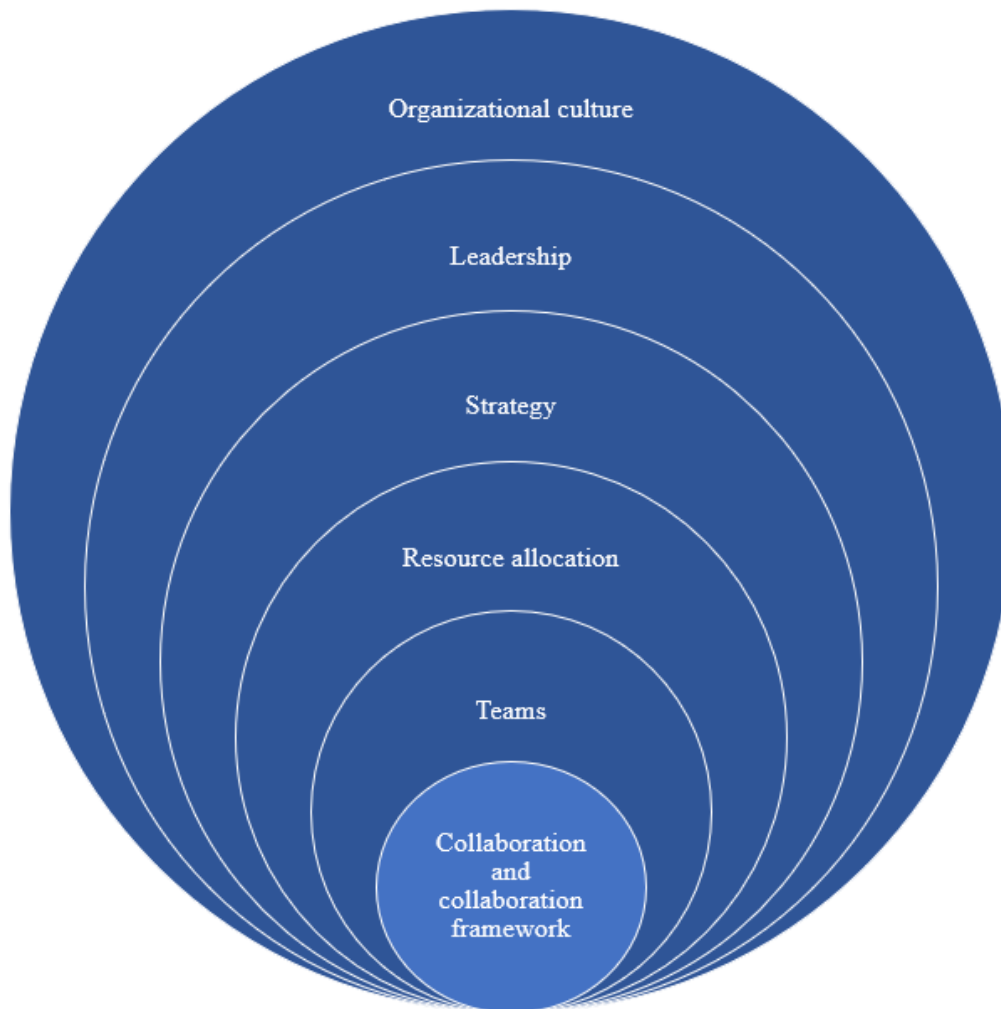
Chapter 1 has provided background on the study, the research purpose, and its significance and defined key terms. Chapter 2 will provide the literature review, reviewing and integrating relevant research on leadership, strategy, teams, and collaboration. Chapter 3 details the study methodology and the study's conceptual framework, procedures, data analysis, limitations, reliability, and validity. Chapter 4 describes the data collection and analysis. Finally, Chapter 5 provides the study's findings and comparison with intra-organizational collaboration dimensions (Fanousse et al., 2021), critical leadership characteristics for creating a collaborative culture, and personnel allocation in a small public agency from the employees' perspective.

CHAPTER 2: LITERATURE REVIEW

This chapter examines the literature on organizational culture, leadership, strategy, resource allocation, teams, and collaboration. This researcher reviewed scholarly literature to answer the overarching research question: “What are the key leadership characteristics for the role of leaders in developing a collaborative culture in a small public water agency from the employees’ perspective?” The current research focused on identifying criteria that assist an organization in developing intra-organizational collaboration to allocate resources and enhance communication to ensure alignment with its strategic objectives.

The researcher performed an in-depth literature review of organizational culture, leadership, strategy, teams, resource allocation, and intra-organization collaboration. Organizations rely on their employees to achieve strategic objectives and fulfill their purpose (Wazirman, 2020). To achieve strategic objectives, an organization’s leaders should provide direction, resources, and support to employees, which requires leadership, strategy, resource allocation, teamwork, and collaboration (Sharma & Sharma, 2022; Wazirman, 2020).

The literature review starts broadly by focusing on the organizational culture, then narrowing through the different themes until finishing with intra-organizational collaboration (see Figure 3). The themes identified are interconnected and are necessary to identifying the leadership characteristics for developing a collaborative culture.

Figure 3*Literature Review Arrangement*

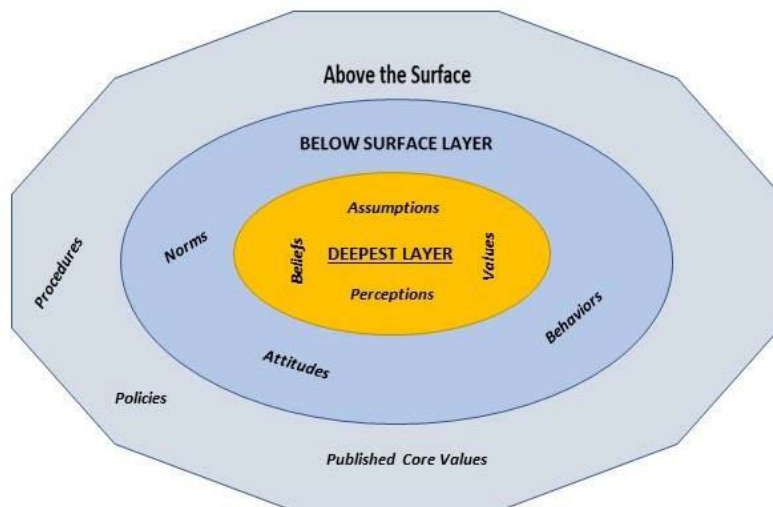
Organizational Culture

Organizational culture influences performance (Hardcopf et al., 2021). An organization's culture, decision making, and interaction among stakeholders influence its performance and ability to achieve its goals while harnessing its knowledge management (Bhatti & Zaheer, 2014; Tan, 2019). By meeting its benchmarks and achieving its goals, an organization's performance and culture reflect its achievements (Cao et al., 2013; Tan, 2019). Tan (2019) emphasized that

leaders are responsible for developing a high-performing organizational culture. Therefore, understanding how organizational culture helps an organization to bring together its different functions to achieve its strategic objectives and enhance its performance is essential.

Organizational culture involves the thoughts and behavior of an organization's human resources through the organization's values, beliefs, and norms (Flamholtz & Randle, 2011; Steinhoff et al., 2019). An organization's strategic plan and culture reflect its mission, vision, and values (Daher, 2016). Widanti and Sumrahadi (2020) opined that an organization's practices and climate reflect its organizational culture. Tan (2019) defined *organizational culture* as "shared beliefs and assumptions" (p. 357).

Organizational culture represents the rules, policies, and procedures employees observe or not to complete tasks (Steinhoff et al., 2019). Steinhoff et al. (2019) described three layers in an organization's culture: (a) the observable surface layer, (b) the top layer below the surface, and (c) the deepest layer (see Figure 4). Organizational behavior and culture also derive from group interests and adaptation to the situation: acquired knowledge evolves; knowledge transfers from long-term employees to new employees and develops from the beliefs, values, and customs within a group or organization (Sueldo & Streimikiene, 2016). As noted in Chapter 1, the current study defines *organizational culture* as an organization's historical practices, assumptions, and behaviors (Steinhoff et al., 2019).

Figure 4*Organizational Culture Layers*

Note: Adapted from Steinhoff et al. (2019), “It’s all about the culture!” *Journal of Government Financial Management*, 68(2), 32-39. Copyright of *Journal of Government Financial Management* is the property of the Association of Government Accountants.

Organizational culture focuses on group dynamics, and the research has evolved from primarily sociology and psychology research to incorporating anthropology research (Bellot, 2011). In his seminal work, Barnard (1938) discussed different groups within an organization and the differences between groups based on membership and recognized that there are both formal and informal organizations. In their seminal work, Lewin et al. (1939) studied group and subgroup behavior to understand the interaction among group members and the effects of interaction on the work. Lewin et al. formulated organizational “climate” studies, which was the beginning of organizational culture studies (Bellot, 2011). Organizational studies continued to evolve until organizational culture was identified as a separate element in organizational theory research (Bellot, 2011; Ouchi & Wilkins, 1985).

Organizational culture terminology entered the research literature when Pettigrew (1979) introduced the term in his research on leaders using drama to identify the elements of symbols,

language, rituals, and myths in creating action and purpose for group members. Ouchi and Wilkins (1985) identified the influences of sociology, anthropology, and sociology research on organizational culture and different approaches to studying organizational culture. Schein (1996) argued that research involving organizations failed to recognize the norms, values, and artifacts that influence a group and which are shared with new members to integrate them into the group. In comparison, Wazirman (2020) reflected that employee performance, leader behavior, team interaction, innovation, stability, concern, and results influence an organization's culture and provide a foundation for enhancing performance.

Steinhoff et al. (2019) explained that an organization's culture influences decision making based on past experiences. Reinforcing an organization's culture by investing in developing employees' skills and enhancing communication makes an organization more likely to achieve its goals (Blauth et al., 2014). In comparison, Sharma and Sharma (2022) determined that organizational culture is critical for strategy implementation based on a positive culture that aligns with the organization's strategies.

Introducing new employees into the culture is essential; it is also important to recognize that they bring experience that may impact the current culture while they are expected to adapt to the organization (Pickering, 2017). Barton and MacArthur (2015) emphasized the need to create a culture where employees feel comfortable challenging the norm or raising issues. From an organizational culture perspective, Painter et al. (2019) recognized the need for intra-organizational workgroups to develop a common language to help remove silos and improve performance.

Organizational culture enhances performance when internal alignment promotes efficiency and effectiveness (Tan, 2019). Tan (2019) opined that an organization's internal

processes create shared beliefs and performance. An organization's culture can allow it to outperform its competitors based on its strategy (Akpamah et al., 2021). Organizations have subcultures, such as departments or teams, communication, and culture that work synergistically to influence an organization's performance (Canel & Luoma-aho, 2018). Understanding that resource allocation requires intra-organizational collaboration—whether at the team or department level—to efficiently deploy the organization's limited resources ensures an organization achieves its objectives (D'Oria et al., 2021).

Arghode et al. (2021) determined that organizational effectiveness improves when an organization's culture supports growth, aligned processes, and employee coordination. Paais and Pattiruhu (2020) observed that an organization's culture and leadership influence employees' job performance and the ability of the organization to achieve its objectives. Aligning an organization's strategic direction with resource deployment, specifically human resources, requires intra-organizational collaboration and leadership direction (Hadjinicolaou et al., 2021).

A solid organizational culture assists with transferring knowledge among employees to improve the organization's performance and develop employees (Pivec & Potočan, 2021). An organization's culture assists employees with understanding their work environment and is based on organizational assumptions, norms, and behavior patterns (Petitta et al., 2015). Brettel et al. (2014) concluded that organizations with developmental and rational cultures are more innovative and proactive. Knowing that establishing and reinforcing preferred values and conduct to fulfill an organization's objectives is achieved through the organization's personnel is essential for management (Jenaru & Dăneci-Pătrău, 2020).

This section has reviewed the impact of organizational culture on resource allocation and collaboration. Resource allocation focuses on how an organization deploys its personnel to

operations, ongoing activities, and projects to ensure sufficient expertise and personnel are available to fulfill its strategic goals (Jenaru & Dănești-Pătrău, 2020). Collaboration allows an organization's personnel to see beyond their specific area of expertise and how their role affects the whole organization (Pivec & Potočan, 2021).

Organizational culture is the essence of an organization, and there are subcultures within the organization (Flamholtz & Randle, 2011; Tan, 2019). Organizational culture, formal and informal, drives the organization, and leadership behaviors can influence the culture (Widanti & Sumrahadi, 2020). To achieve its strategic objectives, an organization needs to understand its culture, reinforce positive actions, and address negative actions that distract from fulfilling its objectives (Gardner, 2017). Creating a culture that effectively and efficiently deploys resources through intra-organizational collaboration is essential for leadership and requires internal alignment (Burger & Pelsler, 2018; Hardcopf et al., 2021).

Leadership

There are a variety of leadership styles; there are also times when leadership is shared or distributed within a team (Cote, 2017). This section focuses on leadership from the perspective of executives and management. Leadership has been studied extensively (Cote, 2017). Formal leadership revolves around organizational control, management, supervision, and administration (Barnard, 1938). Bennis (2007), reflecting on the importance of leadership, identified excellent leaders' competencies as (a) identifying a mission, (b) engaging others to work with them to achieve the mission, (c) creating a framework for the followers, (d) generating trust and optimism, (e) developing others, and (f) delivering results.

The current research focuses on leadership elements, not specific leadership styles. Leaders adapt to different situations, and their leadership style influences how they act

(Safferstone, 2005). Focusing on leadership instead of leadership styles, however, reflects the understanding that leadership is distributed throughout an organization and reaches beyond a title (Youngs, 2017).

Successful organizations rely on good leadership, and creating an organization that engages all organizational elements, communicates expectations, and builds trust is essential for effective leadership (Curtis, 2020). In her seminal works, Follett (Metcalf & Urwick, 2004) emphasized that leaders unify, organize, and integrate the functions and people in an organization to facilitate the processes to achieve the organization's objectives. There are a variety of definitions for leadership, but leadership focuses on creating purpose, not the individual leaders (By, 2021).

Barnard (1938) discussed in depth the role of the executive in an organization, while emphasizing the need for executives to create a purpose and to direct others to fulfill that purpose. In comparison, in his seminal work Prentice (1961) defined leadership as directing others to accomplish a goal. In contrast, By (2021) identified leadership as a collective process separate from the individual, which recognizes that leadership is the responsibility of all—not a select few—and fulfills purpose by all, which benefits a greater number. Rothausen (2022) formulated a new leadership theory that is more inclusive and reflects a collaborative environment that is supportive and creative while focusing on all individuals within the organization in achieving its purpose. The current research defines leadership as defining, communicating, and implementing the vision through collaboration and providing the human resources to fulfill the organization's mission.

Researchers have studied leaders and leadership to understand why and how organizations achieve their vision. (Safferstone, 2005). In her seminal work in the 1920s on

organizations and management, Follett (Metcalf & Urwick, 2004) discussed how leaders must integrate organizational elements, ideas, processes, and objectives to achieve their goals. In comparison, Dennison (1925) discussed the need for a formalized management profession and recognized the need for leadership to use facts, focus on the organization and others over self-interests, and utilize clear thinking to achieve success. Dennison (1951) also recognized the need for leaders to review the past, scan the environment, and work as a team to make informed decisions.

In his seminal work, Barnard (1938) defined an organization as “a system of consciously coordinated activities or forces of two or more persons” (p. 81). Barnard further indicated that a formal organization is present when there is “coöperation among men that is conscious, deliberate and purposeful” (p. 4). The executive’s responsibility is to ensure that employees work together to achieve the organization’s objectives (Barnard, 1938). Barnard further indicated that executives are responsible for communicating an organization’s vision and facilitating the organizational elements to work together to achieve the strategic objectives.

The definition of leadership and the role of leaders continues to evolve. As society moved from farms to industries during the Industrial Age, the need increased for understanding how people work together in organizations. Leadership evolved to meet the complexity of organizations, changes in employee expectations, and technological advancements. Leadership is the essence of a community that requires individuals to be present, engaged, and connected with others to achieve their goals and vision; it is reciprocal and requires trust and credibility among the parties (Posner & Kouzes, 1996).

Recent research has continued to focus on leadership types and not as much on what leadership is or how to create an environment that will continue to exist when leaders change.

Cote's (2017) research focused on leadership theories concerning the process and how leaders motivate and influence others to accomplish their goals. Gandolfi and Stone (2018) argued that current research on leadership does not provide a clear definition of "leadership" or "leadership style" although there is much research on leadership styles. Gandolfi and Stone reframed the discussion about leaders and leadership around "servant" leadership and how it focuses on the individuals tasked with achieving the organizational goals.

Curtis's (2020) research suggested that leaders' thinking preferences affect their leadership style and relationship with their followers. By (2021) recommended that leadership focus on purpose and then determine how to create an environment that integrates purpose, alignment, and commitment internally and externally for leaders and organizations to problem solve. Ideas about leadership and leadership styles and leadership theories are diverse, but the research recognizes that there must be leaders, followers, a goal, trust, and resources to achieve the goal (Gandolfi & Stone, 2018).

Executive leadership influences an organization's culture through decision making, employee interactions, influencing who joins and remains with the organization, and setting the tone regarding acceptable and unacceptable behavior (Alsaqqa & Akyürek, 2021). Paais and Pattiruhu (2020) found that, to achieve organizational objectives, leaders must adapt their leadership style based on the circumstances (e.g., individual employees, organizational culture, a situation). Leaders are essential in creating a supportive culture that encourages employees to work together and enhances communication to improve collaboration (Yu et al., 2022). An organization's leadership sets the tone, creates a vision, reinforces its objectives, and supports its employees by providing the resources to achieve its mission (Steinhoff et al., 2019).

Research supports that leadership is vital and that leadership quality impacts an organization (S. B. Choi et al., 2017; Kythreotis et al., 2010). S. B. Choi et al. (2017) researched team effectiveness relative to transformational and shared leadership styles and determined that different leadership styles affect team effectiveness. Leadership styles impact teams' planning, effectiveness, and organizing abilities (S. B. Choi et al., 2017). Radvany (2021) reflected that shared leadership provides an opportunity to create an inclusive, diverse, inclusionary, and equitable organization and is vital to organizations.

Collaborative and distributed leadership reflect synergy among those working together but still focus on the individual instead of the collective (Youngs, 2017). In comparison, Pitelis and Wagner (2019) determined that organizations that share leadership enhance organizational dynamic capabilities through the engagement and development of their personnel. Stewart et al. (2017) concluded that leaders in a hierarchical structure with preferential status find it challenging to share leadership and empower teams within the organization. Therefore, identifying the organizational structure, leadership practices, and organizational elements and recognizing their effect on the organization is essential to understanding how leadership influences the organization.

An organization's leaders determine how resources are shared or what resources are available to achieve the organization's objectives. Carter et al. (2020) emphasized that executive leaders are responsible for coordinating with all teams, providing resources (including team members), and clarifying how to share the resources. In comparison, Kramer et al. (2018) researched inter-organizational collaboration and determined—while recognizing that leadership is necessary to achieve success—that leadership styles adjust based on the situation within a collaborative process and move horizontally and vertically. From a risk perception and safety

climate perspective, Nielsen et al. (2013) opined that organizations need to encourage openness and involvement between leaders and followers to create a risk-aware culture. Understanding the need to optimize resources to achieve an organization's goals is imperative for success by maximizing value, balancing, and strategic alignment, and leadership is needed to achieve (Müller et al., 2019).

Flink and Chen (2021), in researching how public agencies use their financial resources, identified that leadership is required to ensure that there are systems to facilitate achieving objectives. Leadership is necessary for all organizations, and diversifying leadership within the organization enhances its ability to achieve its goals and develop its employees (Flink & Chen, 2021). Wiewiora et al. (2020) analyzed global project-based organizations and how power and connectivity affect an organization's ability to exchange information effectively to enhance processes and reduce errors. Sharing information across the organization and connecting intra-team and inter-team levels are essential for knowledge exchange, and leadership needs to facilitate these practices (Wiewiora et al., 2020).

Leadership guides elements within an organization to cooperate, coordinate, and collaborate. McDermott and Hall (2016) discussed the leader's role in developing a collaborative culture and stressed the need for leaders to check their ego and model behavior for others. Modeling collaboration and recognizing and reinforcing positive behaviors surrounding cooperation and collaboration helps a leader create a collaborative culture (McDermott & Hall, 2016). McDermott and Hall stated that "to be a leader is to collaborate with others for a common purpose" (p. 157). Further, leaders must recognize that collaboration is necessary to fulfill a vision and this requires more than a single individual to achieve (McDermott & Hall, 2016).

Youngs (2017) discussed collaboration and leadership as practice in the context of higher education, emphasizing that moving from distributed leadership to leadership as practice requires engaging all staff and creating vertical and horizontal lines of communication. In contrast, Young-Hyman (2016) found that an organization's power structure influences how cross-functional teams interact; if power is widely distributed within the organization, team production is impacted. Fanousse et al. (2021) identified collaborative leadership as one of five dimensions necessary to reduce uncertainties in innovation projects, and Bedwell et al. (2012) named leadership as one of six required collaborative behaviors. Leadership behaviors involve setting the vision and aligning efforts within the organization to accomplish its goals (Bedwell et al., 2012; Fanousse et al., 2021).

McNamara (2012) researched the differences between cooperation, coordination, and collaboration in public administration and focused on inter-organizational collaboration. McNamara identified 10 elements that operationalize inter-organizational management and alignment with cooperation, coordination, and collaboration: (a) the design, (b) the formality of the agreement, (c) organizational autonomy, (d) key personnel, (e) information sharing, (f) decision making, (g) resolution of turf issues, (h) resource allocation, (i) systems thinking, and (j) trust.

The current study focuses on resource allocation, key personnel, and information sharing. McNamara (2012) indicated that key personnel are needed based on the participants creating a partnership, and an individual may bring participants together. Regarding resource allocation, McNamara described how physical and non-physical resources may be leveraged to support collaboration goals. McNamara also indicated that information sharing happens through formal and informal communication, which is frequent and open. Public managers need to understand

how to encourage inter-organizational and intra-organizational collaborations; using McNamara's framework can help public managers understand the differences between cooperation, coordination, and collaboration.

Strategy

Organizational strategy is an organization's activities to achieve its strategic objectives (Akpamah et al., 2021). An organization's executives and board members are responsible for creating a vision for its stakeholders and employees to focus on and achieve its long-term goals (i.e., its strategic plan). Wasilewski (2020) identified three phases to an organization's strategic management: the (a) analysis, (b) formulation, and (c) implementation of a strategic planning process. There are limits to an organization's resources, which requires organizations to determine how to allocate resources during the planning and implementation of a strategic plan (Wasilewski, 2020); one framework is the Seven S model. The Seven S framework consists of (a) strategy, (b) structure, (c) systems, (d) staff, (e) skills, (f) style (i.e., culture), and (g) staff (Peters, 2014; Wasilewski, 2020). Organizational leaders are responsible for creating and executing an organization's strategic plan, which is considered "strategic thinking" (Haycock et al., 2012).

Akpamah et al. (2021) defined *strategy* as accomplishing an organization's objectives using its available resources. In comparison, Linkow (1999) explained that "the purpose of strategy is to align and integrate the daily work of all employees around a common, focused direction" (p. 34). Haycock et al. (2012) separated strategy into two categories: strategic vision and strategic execution, with strategic vision focusing on developing the strategy, and strategic execution on the actual plan.

Organizations have adopted ideas surrounding strategy from military leaders to assist them in achieving their objectives (Akpamah et al., 2021). Barnard (1938) identified the action taken by an organization or people to implement the decisions made to achieve the objectives as “business policy.” An essential role of an organization’s executives is to identify its shared purpose (vision) and determine the strategy to implement and communicate it to the others in the organization (Barnard, 1938). Barnard further emphasized that a shared purpose communicated to those in the organization enhances cooperation and coordination to achieve an organization’s objectives.

Business policy evolved into corporate strategy and strategy and structure in the 1960s, then focused on the resources available by reflecting on an organization’s strengths and weaknesses (Hoskisson et al., 1999). Hoskisson et al. (1999) discussed how strategy research moved back to resource-based views and knowledge-based views. A resource-based view in strategy focuses on an organization’s internal strengths and weaknesses compared to its external opportunities and threats (Hoskisson et al., 1999). Strategic management research will continue to evolve and rely on various research techniques to frame strategic management at the firm and the organizational layers (Hoskisson et al., 1999).

“Strategy” entered the research literature in the 1970s as a term and has grown exponentially within business research (Johnson et al., 2007). Johnson et al. (2007) recognized that strategy moved to focus on the organization and not what people or what they do to fulfill the organization’s objectives. Johnson and colleagues focused on strategy as practice, which they identified “as a concern with what people do in relation to strategy and how this influenced by and influences their organizational and institutional context” (p. 7).

In contrast, Linkow (1999) recognized that organization leaders who understand they have limited resources but can create and implement their strategy develop a competitive advantage. Ansari et al. (2015) researched project management in project-based organizations and emphasized the need to align project management with the organization's strategies. Optimizing an organization's resources enhances its efficiency in selecting and strategically aligning its projects (dos Santos et al., 2021).

In comparison, Brito and Medeiros Júnior (2021a, 2021b) researched project-based businesses and strategic alignment. Strategic alignment within projects helps organizations focus on appropriate projects and utilize resources effectively to achieve strategic objectives (Brito & Medeiros Júnior, 2021a; 2021b). To ensure alignment, an organization needs to communicate its strategy, ensure interaction within the organization through teams or inter-team engagement, and evaluate objectives from both an enterprise and a department level (Müller et al., 2019). Haycock et al. (2012), in their study on libraries and strategic thinking, emphasized the need to develop strategic thinking within the organization, not just at the formal leadership, to assist organizations in pivoting and achieving success.

An organization's strategy influences its allocation of personnel resources and collaboration (Brito & Medeiros Júnior, 2021b; dos Santos et al., 2021). Hadjinicolaou et al. (2021) analyzed strategy execution with project portfolio management to understand effects on resource utilization and maximization. Strategic execution relies on efficiently using an organization's resources and aligning its priorities to achieve its objectives (Hadjinicolaou et al., 2021).

In contrast, Musawir et al. (2020) researched how project governance aligns to support strategic organizational implementation. Projects implement an organization's strategy and

utilize project governance to allocate resources and achieve the organization's strategic goals (Musawir et al., 2020). Another perspective (Sabherwal et al., 2019) suggests that aligning information technology and systems with business strategy affects organizational performance in dynamic and complex environments. Organizations must be aware of groupthink and limitations to challenge culture due to a lack of trust or willingness to raise issues that may affect the ability to achieve their goals (Sabherwal et al., 2019). Also, when organizations are unwilling to change technology infrastructure due to concerns about costs and disruption, this may impact an organization's ability to implement its strategy or align projects with strategic objectives (Sabherwal et al., 2019).

Strategy and culture are elements of collaboration within an organization (Bedwell et al., 2012; Fanousse et al., 2021). Bedwell et al. (2012) discussed the need for strategic planning to ensure appropriate staffing and the necessary elements to facilitate inter-team collaboration. McDermott and Hall (2016) observed that creating a collaborative culture in an organization requires (a) a shared vision, (b) communication, (c) aligning personnel based on strengths and skills, (d) identifying ground rules, (e) managing conflict, and (f) synchronizing tasks for efficiency and productivity.

Strategy and culture must align within an organization to facilitate collaboration that encourages sharing ideas and creates open communication and trust (McDermott & Hall, 2016). An organization's strategic plan facilitates collaboration to achieve its goals and align its resources by leveraging its employees' skills and knowledge to effectively utilize and engage them (Edmondson & Harvey, 2018; Maritan & Lee, 2017b).

Resource Allocation

Organizations can struggle when implementing a strategic plan due to management challenges such as allocating resources (Engwall & Jerbrant, 2003). When trying to achieve objectives, organizations with multiple priorities can encounter issues surrounding priority setting and resource allocation, interdependencies, a lack of resources, competition between priorities, and problem solving (Engwall & Jerbrant, 2003). Engwall and Jerbrant (2003) concluded that issues with allocating resources (specifically personnel) on multiple projects include internal politics, hoarding resources, and failing to account for employees' time on projects while they between different projects.

Similarly, Lepak and Snell (1999) concluded that organizations need an infrastructure that strategically supports using their human capital. Lepak and Snell studied how organizations address their human capital needs through internal or external resources to achieve their strategic objectives. Aligning human capital with an organization's strategy is necessary for strategic human resources to remain dynamic and is relevant for organizational performance (Lepak & Snell, 1999).

Another challenge organizations face is allocating resources when those resources are constrained; identifying project needs at the front end can reduce resource constraints (Deblaere et al., 2007). Deblaere et al. (2007) observed that organizations grapple with allocating resources to projects due to schedule slippage, scope changes, and other issues. Deblaere et al. suggested that addressing resources at an enterprise level instead of at the project level would help identify resource constraints and adjust resource allocation when needed.

In contrast, Maritan and Lee (2017a) researched resource allocation from an investment perspective. Resource allocation is complex and requires organizations to understand their

capabilities and allocate their resources efficiently to create value (Maritan & Lee, 2017a).

Maritan and Lee (2017b) emphasized that power and politics within an organization determine the allocation of resources and that different levels within an organization are responsible for identifying resource needs and how to allocate resources.

An organization's human capital is essential to implementing its strategic goals (Greer et al., 2017). Greer et al. (2017) defined *human resource capital* as the organization's personnel's knowledge, skills, and abilities available to achieve its objectives. In comparison, Lee et al. (2019) opined that organizations need to align business processes and human resource management to effectively pivot and adjust allocation of personnel due to absence or workload issues. Rezaee and Pooya (2019) determined that human resource allocation for operations and projects impacts an organization's performance and is essential to implementing its strategic objectives.

In his seminal work, Barney (1991) described an organization's resources as "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (p. 101). Human capital resources focus on employees and their skills, knowledge, and abilities, as well as the intra-organizational interaction throughout the organization (Barney, 1991). An organization's ability to implement its strategy is dependent upon its available resources (Barney, 1991).

Organizations struggle with assigning work to workers, whether using a workflow system or delegating work based on a worker's organizational role (Kumar et al., 2002). Kumar and colleagues' (2002) research focused on workflow management systems; they determined that organizations utilize two primary mechanisms (i.e., push and pull) to distribute the workload.

Focusing on workload management systems, Kumar et al. recognized that technology and assignment based on position affect quality and performance using the push-and-pull mechanisms. Workflow involves pushing work to a single employee; an employee pulls work from a centralized bucket of work that revolves around an either-or system which fails to understand the resource's actual workload (Kumar et al., 2002). Kumar et al. determined that a workflow management system should be dynamic, allowing flexibility in dispensing and assigning work to employees. Leadership should recognize that efficiently delegating and dispensing work is paramount for an organization's success (Kumar et al., 2002; van Bunderen et al., 2018).

Some organizations have multiple teams that utilize the same resources, which requires the individuals assigned to the teams to understand the intra-team and inter-team goals and address the allocation of resources (Cuijpers et al., 2015). Cuijpers et al. (2015) determined that organizations that operate with multiple teams must recognize the inherent conflict and assist teams with understanding their roles and reducing issues between them. Employees assigned to multiple teams can struggle with prioritizing the outputs and their role in facilitating the output when assigned to multiple teams (Cuijpers et al., 2015).

Understanding that organizations seek ways to optimize their human resources to meet their performance objectives, Bouajaja and Dridi (2016) analyzed the literature on human resource allocation. Bouajaja and Dridi focused on human resource allocation from a broad perspective, not within a specific industry. Their research recognized that human resource allocation is convoluted because it involves people and requires a multifaceted review that addresses constraints in workflow throughout the organization (Bouajaja & Dridi, 2016). The current research on resource allocation is vast, industry-specific, and fails to review the human

aspects to address human resource allocation at the organization and project levels (Bouajaja & Dridi, 2016).

Organization leaders striving for operational efficiency realize that resource allocation, specifically human resource allocation, is critical (Wibisono et al., 2016). Wibisono et al. (2016) focused their research on the business process systems in an organization using a naïve Bayes model, a subset of the Bayesian network. The researchers developed an algorithm for real-time and “human-centric” resource allocation.

In comparison, van Bunderen et al. (2018) recognized that an organization’s teams rely on the same limited resources and might not be able to utilize necessary resources for their projects, creating inter-team and intra-team conflicts. Resource conflict impacts an organization’s ability to achieve its strategic objectives (van Bunderen et al., 2018). Inherently, organizations utilizing multiple teams create an environment of conflict when requiring teams to compete for resources (van Bunderen et al., 2018).

Project owners and project managers are concerned with allocating human resources to projects (Dabirian et al., 2019). Dabirian et al. (2019) researched human resource allocation in construction projects using dynamic modeling through system dynamics. Dabirian and colleagues determined that modeling human resources biweekly for the necessary labor for construction projects helped assign the appropriate labor, reduce costs, and shorten project completion time. Optimizing resources using a dynamic model and recognizing that project schedules are continuously changing due to various issues, project managers and owners need to adjust allocation of human resources based on project needs (Dabirian et al., 2019).

Similarly, Carter et al. (2020) identified the need for leadership in multiple-team organizations and emphasized that collaboration is necessary for effectively allocating human

resources. Carter et al. recognized that leaders and teams can struggle with prioritizing team and organizational goals, which impacts allocating resources within multiteam organizations. Recognizing the need to weigh the competing requests for resources and priorities requires leadership that focuses on achieving overall strategic goals, not just individual team goals (Carter et al., 2020).

Resource allocation (from the perspective of multiple-team membership, MTM) also impacts an individual's ability to focus on individual tasks or the ability to allocate time effectively, harming individual, team, and organizational performance (Margolis, 2019). Margolis (2019) conducted a literature review on the individual- and team-based perspective of individuals assigned to multiple teams simultaneously (multiteaming or MTM) across disciplines. Employees assigned to multiple teams simultaneously are overloaded, resulting in strain on both employees and projects due to stress, inability to meet deadlines, and lack of focus (Margolis, 2019). Margolis identified the need for further research into the interdependencies of being a participant or member of a team, which determines how an individual focuses on = different team tasks and has been limited in current research.

An organization's performance is related to the effective use of its resources (Kieling et al., 2021). Kieling et al. (2021) studied the allocation of human resources in projects through a literature review focusing on the techniques and identified research gaps. Kieling and colleagues' review revealed that many organizations could not change their strategic goals during a project and failed to provide a mechanism to allow learning from prior allocations to adapt for future projects (Kieling et al., 2021). Project management and allocating human resources are essential activities for an organization, but the inability to adapt during projects or to learn from the past ultimately negatively affects an organization's performance (Kieling et al., 2021).

Inadequately or incorrectly allocating an organization's human resources impacts its ability to achieve its objectives (Kieling et al., 2021; van Bunderen et al., 2018). Mortensen and Gardner (2017) noted that organizations struggle with sharing personnel across multiple teams. Understanding that projects, initiatives, and daily operations have interdependencies that affect an organization's ability to achieve its objectives requires leaders to emphasize the need for intra-organizational coordination when using multiple teams (Mortensen & Gardner, 2017).

Interpreting the effects of multitasking and MTM from an individual's perspective informs understanding of the effects on performance and resource allocation (Altschuller & Benbunan-Fich, 2017). Altschuller and Benbunan-Fich (2017) evaluated multitasking and MTM from the individual's perspective to understand the impacts on performance and resource allocation. Through their research using focus groups, Altschuller and Benbunan-Fich identified effects on individuals' focus, coordination, and urgency when assigned to multiple teams, which may be positive or negative and requires balancing demands on team members.

Organizations with strong cultures manage their personnel successfully and efficiently (Devi et al., 2022). Human resource allocation relating to employees' workload and satisfaction affects an organization's performance and employees' contribution to achieving the organization's objectives (Paais & Pattiruhu, 2020). Resource allocation can positively impact collaboration and organizational performance (Sutrisno et al., 2021). Allocating an organization's limited resources to activities that may need fewer resources affects performance, which requires adaptability and efficient allocation of limited resources to enhance performance (Beck & Schmidt, 2015).

Resource allocation (i.e., assigning employees to multiple teams simultaneously) can impact intra-organizational collaboration (Paais & Pattiruhu, 2020; Sutrisno et al., 2021).

McNamara (2012) indicated that efficient resource allocation happens during collaboration when there are engaged individuals and a purpose for the collaboration. Understanding the resources the participants contribute is essential; team participants bring expertise and funding to achieve organizational goals (McNamara, 2012). McNamara emphasized that information sharing supports effective resource allocation by understanding what individual participants contribute and aligning the allocation of specific resources. Therefore, resource allocation and information sharing are necessary for inter-organizational and intra-organizational collaboration (McNamara, 2012).

Van de Brake et al. (2018) conducted research in a highly collaborative project-based organization focusing on job performance over 5 years. Van de Brake et al. (2018) concluded that although an employee's initial assignment to a new team decreased performance, employee performance increased through the exchange of knowledge and increased collaboration with limited impact on resource allocation long-term. Overall, allocating resources effectively initially and being able to adjust as needed is necessary for a collaborative culture and increased performance (van de Brake et al., 2018).

Karnsomdee (2022) researched how public entrepreneurship influenced organizational development and discussed the need for public managers to allocate internal resources such as human resources and align internal administration. Further, Karnsomdee indicated that information sharing and human resources development require a proactive environment that public managers can facilitate by developing their staff members and creating a strategic and participative administration.

Allocating an organization's human resources requires communication, collaboration, and alignment with the organization's priorities. Recognizing that an organization's resources are

limited and optimizing them requires organizational managers to plan through collaboration by understanding workload needs (Ang et al., 2020). Inter-team and intra-organizational information exchange help transfer work when bottlenecks occur due to employees being overburdened by tasks associated with daily operations and projects (Lee et al., 2019). Margolis (2019) emphasized the need for managers to recognize that assigning employees to multiple teams creates unique demands on the employees and requires managers to collaborate to ensure the assigned tasks are completed and to prevent bottlenecks.

Teams

Organizations rely on teams to achieve their goals (Mathieu et al., 2008; Perkins et al., 2012). This section will review teams, cross-functional teams, and multiteam membership to understand how inter-team and intra-organizational collaboration affect an organization. Teams are essential to an organization's internal processes and to ensure that projects are delivered on time while aligning with the organization's strategic goals (Haas & Mortensen, 2016; Perkins et al., 2012). Reimer et al. (2017) explained that teams "are the building blocks of organizations" (p. 13).

This section defines teams, cross-functional teams, MTM, and multiteam systems (MTS). A team is multiple people who work or play together to achieve a task (Merriam-Webster, n.d.). Cohen and Bailey (1997) described a team as a group of interdependent people responsible for outcomes, seen as a subset of a larger organization that interacts across boundaries within the organization. Reimer et al. (2017) defined a team as more than three individuals working together to accomplish a task or goal with a history and future, relying on each other and interacting regularly. For the current study, a *team* is a group within an organization that works together to achieve a task.

A cross-functional team consists of individuals from different departments with various skills and experience working together with the ability to solve problems or complete projects (G. M. Parker, 1994). Cross-functional teams combine individuals with varied backgrounds and roles organized to achieve an organization's objectives, goals, or tasks (Reimer et al., 2017). For the current study, a *cross-functional team* is a group of individuals from different departments and job roles working together to achieve a task.

MTM involves an individual who has concurrent membership in multiple teams (Altschuller & Benbunan-Fich, 2017; O'Leary et al., 2011). Employees, whether in large or small organizations, can be assigned to various teams; assignment to multiple teams is more common in smaller organizations (Altschuller & Benbunan-Fich, 2017). Van de Brake et al. (2018) recognized that project-based and knowledge-based organizations' regular use of teams relies on employees being simultaneously assigned to different groups.

MTS revolve around multiple teams working together to accomplish tasks (Hu et al., 2022; Reiter-Palmon et al., 2021). Mathieu et al. (2001) described MTS as "two or more teams that interface directly and interdependently in response to environmental contingencies toward the accomplishment of collective goals" (p. 290). In MTS, teams work within a system and are interdependent with another team within the organization to achieve their goals (Mathieu et al., 2001).

Historically, people have worked in teams to hunt or harvest crops, as well as in organizations (Salas & Cannon-Bowers, 2000). From an organizational perspective, the research on the different types of teams continues to evolve and is vast (Mathieu et al., 2008). Cohen and Bailey (1997) discussed how groups work together and their effect on organizational performance.

Teams

Organizations have different collaboration levels, including traditional, team-based, or collaborative teams (Beyerlein et al., 2003). Beyerlein et al. (2003) identified traditional teams as co-located, created by management, and intact teams that involve cohesion, commitment, and utilize expertise more effectively. In comparison, Cohen and Bailey (1997) identified different types of teams within an organization: (a) work teams, (b) parallel teams, (c) project teams, and (d) management teams. Teams operate in different organizations for various functions, and the research into teams continues to evolve (Cohen & Bailey, 1997; Margolis, 2019; Mathieu et al., 2008).

The literature on teams is broad and includes MTM and MTS, which are more recent topics. Research on teams has focused on team effectiveness (S. B. Choi et al., 2017; Gist et al., 1987), climate (Kukenberger & D’Innocenzo, 2019), shared leadership (S. B. Choi et al., 2017; Kukenberger & D’Innocenzo, 2019), performance (Cohen & Bailey, 1997), and mediator–team outcome relationships (Mathieu et al., 2008). For the current study, the researcher focused on MTM and MTS to understand the critical characteristics for leadership to create a collaborative culture and effectively deploy limited human resources.

Multiple Team Membership (MTM)

As previously noted, MTM is when an employee works on more than one team concurrently (O’Leary et al., 2011). The number and variety of an individual’s team assignments drive productivity and learning in MTM (O’Leary et al., 2011). Although most research has focused on individual teams, there is some research on MTM and its influence on performance (O’Leary et al., 2011).

The literature on MTM, however, is limited and fails to address managing employees on multiple teams and the effects on collaboration or organizational performance (Chen et al., 2019; Rapp & Mathieu, 2019). Rapp and Mathieu (2019) researched MTM using social identity theory to identify satisfaction and job performance from an employee perspective by determining individual or team characteristics impact. Rapp and Mathieu stressed that organizational leaders need to understand how to support multiple team members at the individual, team, and organizational levels.

Leaders must understand how multiple team membership requires active management and how team leadership impacts motivation and performance at the individual, team, and organizational levels (Chen et al., 2019). Chen et al. (2019) conducted three studies focusing on MTM, leadership, and empowerment at the individual, team, and organizational levels. Individuals carry their experiences from one team to the next, and leaders need to recognize that empowering leadership on a team may affect other teams where the individuals are participants.

Van de Brake et al. (2018) researched how MTM impacts individual performance. An individual employee assigned to multiple teams may have a decrease in performance initially, but over time performance improves (van de Brake et al., 2018). However, van de Brake et al. (2018) clarified that their research had limitations because it only focused on team membership and performance limited in time, not on initial hire at an organization. Therefore, future research needs to follow employees from initial hire for an extended period to understand the effect on employee performance (van de Brake et al., 2018).

Crawford and colleagues' research (2019) identified that complex work tasks performed by teams with members assigned to multiple teams negatively affects unit performance. Crawford et al. focused their research on the Department of Veterans Affairs, Veterans Health

Administration, (a) where high-level problems were shared across teams by team members assigned to multiple teams and (b) the impact on team performance. There is a need for further research on MTM and effects on team performance, focusing on the organizational level beyond the individual and team level (Crawford et al., 2019).

Van de Brake and Berger (2022) noted that MTM could impact individual and team performance based on the individual's role, diversity in the role, and the number of teams on which an individual participates. Although MTM is necessary for many organizations, leaders need to realize the effect on employees assigned to multiple teams, ensure teams deliver quality projects, and monitor team assignments to ensure the best outcomes for both members and teams (van de Brake & Berger, 2022). MTM research continues to evolve and needs to look at the effects at the individual, team, and organizational levels (van de Brake & Berger, 2022).

Multiteam Systems (MTS)

In their seminal work, Mathieu et al. (2001) identified MTS as a framework that reflects the complex environment where multiple interdependent teams work together to accomplish an overarching shared goal. Mathieu et al. (2001) defined MTS as a "team" comprising the organization and individual teams. Leadership in the team and the MTS must (a) integrate the individual teams to collaborate, (b) provide strategic and operational direction for all teams, (c) engage stakeholders with all the teams, and (d) create a link between teams (Mathieu et al., 2001).

In comparison, DeChurch and Marks (2006) researched the effects of leadership in MTS, specifically on collaboration, performance, and creating a culture that supports teams to achieve goals. Planning is essential in MTS, strategizing at the team and inter-team levels to ensure the coordination of the organization's resources efficiently to achieve the organization's strategic

goals (DeChurch & Marks, 2006). Coordination, implicit and explicit, at the intra-team and inter-team levels positively affects functional leadership (DeChurch & Marks, 2006).

Shuffler et al. (2015) reviewed MTS from an interdisciplinary perspective and MTS effectiveness. One concern regarding MTS is team size and resource conflicts, which affect both team and organizational performance (Shuffler et al., 2015). Therefore, organizations must understand team composition, linkages between the teams, strategic goals and resources, and the teams' purpose and membership (Shuffler et al., 2015).

In contrast, Lanaj et al. (2018) determined that organizations that deploy MTS may need to go beyond setting strategic goals at the organization and team levels. Lanaj et al. researched divergence in risk preferences between teams and leadership in MTS. Organizations utilizing MTS must encourage divergent goals and preferences to enhance performance and team behaviors by building on team diversity, expertise, and aspirations to achieve strategic goals (Lanaj et al., 2018).

Shuffler and Carter (2018) reviewed the MTS research to identify the literature's key points and future research needs. MTS rely on teamwork and collaboration to accomplish goals and need leadership to develop a sense of purpose and coordination between teams (Shuffler & Carter, 2018). Shuffler and Carter opined that organizations use MTS systems to accomplish intricate goals, allow the organization to break down tasks into smaller steps, and assist with achieving the goals in manageable pieces.

Waring et al. (2020) researched joint decision making in MTS involving emergency response during disasters. Interagency or inter-team training is needed to improve decision making during emergencies by understanding the goals of different responders and how they support each other in accomplishing their goals based on their roles, and identifying where

decisions break down and why (Waring et al., 2020). Emergency response agencies work together during an emergency, so understanding their roles and training to remove barriers and understand capabilities will improve decision making and outcomes (Waring et al., 2020).

Organizations rely on teams and MTS, which results in employees participating on multiple teams to achieve strategic goals and objectives (Matusik et al., 2022; Rico et al., 2018). Teams are not islands in an organization but interact with other teams or individuals to achieve their goals (Carter et al., 2020). Carter et al. further determined that inter-team interaction is necessary and relies on intra-team and inter-team leadership to understand the need to engage and work together to allocate resources and achieve objectives.

Similarly, To and Ko (2016) concluded that collaboration enhances team relationships and organizational learning to achieve common goals. Burger and Pelsler (2018) stated that an organization's leaders need to understand their teams' expectations to ensure alignment of operations. Employee engagement and team effectiveness affect an organization's performance (Devi et al., 2022). Shared leadership increases team creativity because multiple leaders work together and leverage their collective strengths to assist the team (Xie et al., 2021). Therefore, MTS and teams are essential to organizations' productivity and effectiveness.

Teams, MTM, and MTS can enhance performance, transfer knowledge, and increase organizational collaboration (To & Ko, 2016; Zhu et al., 2020). Reiter-Palmon et al. (2021) determined that smaller organizations may have different needs and outcomes based on limited resources and task overload on individual team members. Similarly, van Bunderen et al. (2018) identified that inter-team conflict occurs over limited resources and differing priorities.

Organizations utilizing MTS with employees assigned to multiple teams should align strategic goals, set expectations, and create a structure to assist teams with accomplishing their

goals while reducing conflict and enhancing collaboration (Murase et al., 2014). Leadership and guidance are essential to implementing a cross-functional team system with shared leadership at the inter-team and intra-team levels to increase performance and engage stakeholders (Pauley et al., 2022). Team creativity and shared leadership require trust and support among team members and the organization to accomplish an organization's objectives (Xie et al., 2021).

Organizations will continue to utilize teams and MTS, which relies on multiple team members (Bruccoleri et al., 2018). Recognizing the impact of MTM on an organization's resources, specifically its human resources, and performance requires leadership, engagement, and understanding (Liou, 2018). Training employees and leaders to engage (Mell et al., 2020), collaborate (Luciano et al., 2020), and develop trust are essential elements in MTS organizations and necessary to avoid overextending employees (Altschuller & Benbunan-Fich, 2017; Mortensen & Gardner, 2017).

Collaboration and the Collaboration Framework

Collaboration, whether intra-organization or inter-organization, is essential for organizations to achieve their strategic objectives (Sutrisno et al., 2021). Sutrisno et al. (2021) opined that intra-organizational collaboration and motivation positively affect organizational performance. The current research focuses on intra-organization collaboration revolving around the effects of MTS and MTM on resource allocation.

Most current literature on collaboration within organizations focuses on team collaboration (Hu et al., 2022), inter-organization collaboration (C. R. Parker, 2020), education (Gajda & Koliba, 2007; Wightman et al., 2020), collaboration in research (Calancie et al., 2021), intra-organizational collaboration for innovation (Fanousse et al., 2021), and communities of practice (Gajda & Koliba, 2007; Valaitis et al., 2018). The literature on collaboration is broad;

the current study focuses on the leadership characteristics needed to create a collaborative culture from the employees' perspective to assist with resource allocation in the organization. The current study uses the intra-organizational collaboration dimensions (Fanousse et al., 2021) to evaluate the alignment between operations and resource allocation using collaboration within an organization. This section reviews the literature on collaboration, narrowing the review to intra-organizational collaboration in different organizations, and discusses the intra-organizational dimensions for collaboration identified by Fanousse et al. (2021).

Collaborating is when two or more people work together to accomplish a goal (Merriam-Webster, n.d.). The definition of collaboration continues to evolve but focuses on more than two entities working together to achieve a common goal (Yousefian et al., 2021). Gray (1985) defined it as individuals coming together to share their different perspectives and working together to solve a problem.

Collaboration theory involves stakeholders making joint decisions to solve problems. Gray (1989) identified the critical elements for collaboration: (a) stakeholder interdependence; (b) solutions deriving from dealing constructively with differences (c) joint ownership of decisions, (d) collective responsibility among stakeholders for the future direction of the “domain,” and (e) recognizing that collaboration is an emergent process (p. 227). Gray (1989) and Wood and Gray (1991) elaborated on the definition of collaboration, describing it as a group coming together and interacting to solve a problem after establishing shared rules, norms, and structures to resolve the problem (Gray, 1989; Wood & Gray, 1991).

Lewis et al. (2010) described inter-organizational collaboration as involving (a) cooperation, coordination, and exchange of resources (e.g., people, funding, information, ideas); and (b) mutual respect for individual and joint goals (p. 462). Bedwell et al. (2012) defined it as

when two or more organizations undertake a process to achieve a shared goal, with the interaction evolving throughout the process. Collaboration—whether inter-organization, intra-organization, or inter-team—incorporates two or more entities working together to accomplish a shared goal by utilizing an agreed framework for rules, norms, and structures (Bedwell et al., 2012; Wood & Gray, 1991).

In contrast, cooperation and coordination rely on connecting elements to achieve individual goals. Collaboration is deeper than cooperation or coordination and requires a purpose and the willingness to achieve it by working with others to fulfill the vision (Fogel, 2020; Pettersson & Hrelja, 2018). Intra-organizational collaboration involves different organizational elements, such as different teams or departments, utilizing their expertise to align resources to achieve a goal (Berglund et al., 2021; Yousefian et al., 2021).

In her seminal work, Gray (1985) introduced collaboration theory, which addresses inter-organizational collaboration to solve problems. Gray (1989) elaborated on collaboration, defining it as a “process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited visions of what is possible” (p. 5). Wood and Gray (1991) indicated that “collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain” (p. 146).

Beyerlein et al. (2003) discussed collaborative organizations and how they expand on teams by understanding the complex and continuously evolving environment that requires the organization to be flexible and relies on the interdependencies within the organization. Beyerlein

et al. (2003) defined collaboration as individuals working together, indicating that collaboration involves internal and external relationships and improves organizational performance.

Bedwell et al. (2012) explored collaboration within human resource management and emphasized that individuals collaborate to attain goals. The researchers shared a collaborative performance framework that identifies (a) adaptive behavior, (b) extra-role behavior, (c) information processing behavior, (d) leadership behavior, (e) sense-making behavior, and (f) task execution behavior within collaborative behavior that facilitates the interaction between task and relationship. Bedwell et al. elaborated that collaboration overlaps with processes such as cooperation, teamwork, and coordination and relies on interdisciplinary engagement.

In contrast, McNamara (2012) focused on inter-organizational collaboration, cooperation, and coordination in public administration, recognizing various organizational interactions. McNamara distinguished the elements of cooperation, coordination, and collaboration as: (a) design, (b) formal agreement, (c) organizational autonomy, (d) key personnel, (e) information sharing, (f) decision making, (g) conflict resolution, (h) resource allocation, (i) systems thinking, and (j) trust. Public organizations recognize that integrating processes through collaboration, partnerships, and community involvement aligns resources to achieve their goals (McNamara, 2012).

Kramer et al. (2018) studied an interagency task force through the strategic planning process, observing its leadership practices based on inter-organizational collaboration. Based on observations of the interagency task force, Kramer et al. determined that leaders need to focus internally and externally while working together to identify the vision and mission by using a variety of leadership styles; multiple leadership styles are required to be successful.

Further, Yousefian et al. (2021) indicated that collaboration enhances efficiency and effectiveness by streamlining actions in achieving an organization's objectives. Yousefian and colleagues researched intra-organizational collaboration in the public health sector during disasters, expanding beyond an individual health organization and identifying the need for pre-disaster planning to create a framework for public health organizations to collaborate effectively during a crisis.

Calancie et al. (2021) focused on collaboration in research and identified a consolidated framework: (a) community context, (b) group composition, (c) structure and internal processes, (d) group dynamics, (e) social capital, (f) activities that influence or take place within the collaboration, (g) activities that influence or take place in the broader community, and (h) activities that influence or take place in the collaboration and community. The intra-organizational or inter-team collaboration research has generated a variety of frameworks with similar elements (Calancie et al., 2021).

Yousefian and colleagues' (2021) intra-organizational collaboration conceptual framework includes (a) initial conditions, (b) collaborative processes, (c) collaborative structures, (d) facilitators, (e) conflicts and tensions, and (f) accountabilities and outcomes. Research consistently identifies leadership, strategy, and collaborative culture as essential for intra-organizational collaboration and effective allocation of resources (Bedwell et al., 2012; McDermott & Hall, 2016; Yousefian et al., 2021). To be successful, collaboration requires leadership, support from upper management, trust among those collaborating, and an understanding of the purpose (Fanousse et al., 2021; Yousefian et al., 2021).

Fanousse et al. (2021) researched effective organizational practices that reduce uncertainties surrounding innovative projects and increase project achievement. Fanousee et al.

identified uncertainties (risks) as threats and opportunities that organizations should understand and address. The researchers identified five dimensions for intra-organizational collaboration for cross-functional teams to perform at a high level: (a) collaborative relationships, (b) collaborative leadership, (c) communication and sharing information, (d) trust formation, and (e) joint decision making (Fanousse et al., 2021). Intra-organizational collaboration dimensions increase organizational learning and assist with reducing uncertainty, which in turn enhances organizational performance (Fanousse et al., 2021).

Intra-organizational collaboration occurs routinely and can enhance performance when it is effective (Gajda & Koliba, 2007). Collaboration within an organization decentralizes management and allows all employees to engage and utilize their expertise to enhance the organization's performance (Fanousse et al., 2021; Fogel, 2020). Collaboration allows employees to drive operations from their perspective because management is decentralized, and the organizational base is engaged in implementing the vision instead of being directed by the executives (Fogel, 2020). Creating a collaborative culture within an organization enhances its culture, improves intra-organizational collaboration, provides quality outcomes, and efficiently uses resources (Fogel, 2020).

Knowledge transfer in an organization is encouraged through its culture; collaboration is a mechanism to assist with the transfer of knowledge (Pivec & Potočan, 2021). Knowledge transfer is essential for intra-organizational collaboration and needs to be encouraged to increase performance, develop employees, and enhance organizational culture (Pivec & Potočan, 2021). Intra-organizational collaboration assists with organizational sustainability and relies on knowledge exchange, organizational culture, and staff development (Pivec & Potočan, 2021).

Similarly, Casey et al. (2020) emphasized the need for trust in collaboration and building solid relationships, which is essential for implementing and sustaining improvements within schools. Collaboration is an organizational strategy that the education sector relies on to implement improvements in school outcomes (Casey et al., 2020). Organizations must recognize that utilizing collaboration is complex within an organization that operates in silos; collaboration can help mitigate the silo mentality (Casey et al., 2020). Therefore, leadership is essential to mitigating silos, increasing knowledge exchange, and creating a collaborative culture (Casey et al., 2020).

Organizational resource allocation requires management to identify organizational needs and effectively allocate limited resources, which in turn requires intra-organizational collaboration (Ang et al., 2020). Assigning employees to multiple teams or collaborative efforts can reduce their effectiveness, create conflict due to the assignments, and overextend employees (Bouajaja & Dridi, 2016). Valaitis et al. (2018) determined that a collaborative organizational culture, executive support for collaboration, maximized use of human resources, and communication channels were important for intra-organizational collaboration. In comparison, Kieling et al. (2021) emphasized that allocating personnel in projects efficiently required collaboration and the ability to adapt when projects or personnel change.

In their seminal work on teams, Marks et al. (2001) determined that intra-organizational collaboration assisted team-based organizations in working together, mitigating conflict, and allocating resources to achieve objectives. MTM can impact an individual's effectiveness due to competing objectives and multitasking (Altschuller & Benbunan-Fich, 2017).

Summary

Crawford et al. (2019) recognized that MTM could negatively affect an individual's focus and effectiveness. Utilizing MTM in an organization requires leaders to ensure collaboration and efficiently allocate the organization's human resources and not overextend employees (Crawford et al., 2019). Bond-Barnard et al. (2018) determined that trust, collaboration, knowledge exchange, and resource allocation assist with project success.

The research literature is voluminous and broad on leadership, organizational theory, and collaboration (Marks et al., 2001); collaboration research continues to evolve and is diverse (Fanousse et al., 2021; Wood & Gray, 1991). Organizations collaborate internally and externally to achieve their objectives (Barnard, 1938; Fanousse et al., 2021). For the literature review, the researcher focused on intra-organizational collaboration, how collaboration affects an organization's performance, and what is needed to create a collaborative culture (i.e., executive sponsorship, resources, and the time to collaborate; Wood & Gray, 1991).

In his seminal work, Barnard (1938) identified that executive leadership is responsible for setting the organizational tone, leading by example, and utilizing an organization's resources efficiently. Parker (Metcalf & Urwick, 1994) determined that, to empower cross-functional teams, leaders need to (a) ensure there are clear team goals and a roadmap to achieve them; (b) gain team member and stakeholder commitment to achieve the goals; (c) reiterate collaboration and team rewards; (d) provide training on working in groups and with diverse individuals; and (e) establish policies, procedures, and processes to support a collaborative environment.

Responsible leaders engage employees to achieve an organization's strategic objectives (Metcalf & Urwick, 2004). An organization's performance is directly related to its ability to allocate its resources effectively, engage its employees, implement a strategic plan, and develop

an organizational culture (Devi et al., 2022). Effective collaboration requires knowledge production, shared identity, and collective agency, which are challenging to require or impose at the outset and rely on communication (Koschmann, 2016).

To be effective, intra-organizational collaboration incorporates an organization's culture, leadership, strategy, resource allocation, and teams (Devi et al., 2022). The intra-organizational dimensions are collaborative relationships, collaborative leadership, communication and sharing information, trust formation, and joint decision making (Fanousse et al., 2021). Leadership, relationships, communication, trust, and joint decision making are essential for effective collaboration (Fanousse et al., 2021).

The gap in research on essential leadership criteria for collaboration from employees' perceptions provided the foundation for this literature review, which has focused on collaborative relationships and collaborative leadership, organizational culture, strategy, resource allocation, teams, and collaboration. The constructs that frame the current study's findings are collaboration theory (Gray, 1985; Wood & Gray, 1991) and the intra-organizational collaboration dimensions (Fanousse et al., 2021). The researcher reviewed data collected from survey participants through the lens of the intra-organizational collaboration dimensions: collaborative relationships, collaborative leadership, communication and information sharing, trust, and joint decision making. The review of intra-organizational collaboration challenges focused on collaborative relationships and leadership to determine whether there is a difference between intra-organizational collaboration dimensions (Fanousse et al., 2021) and the perceptions of managerial and non-managerial employees. The literature suggests there is a need for researching employees' perceptions of essential leadership characteristics in creating a collaborative culture (Fanousse et al., 2021).

Chapter 3 discusses the research methodology used for this study: the research design, population description, and sample, along with the data collection methodology, measurements and instruments, reliability and validity, and ethical considerations. The chapter concludes with the data analysis.

CHAPTER 3: METHODOLOGY

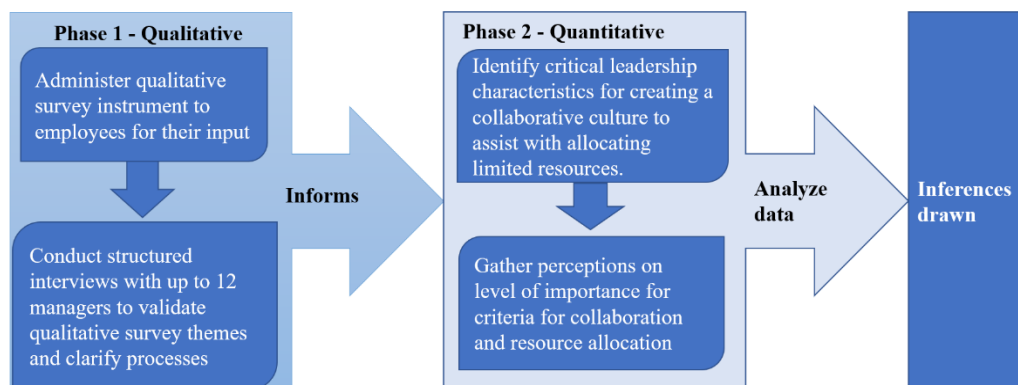
Research Design

This study used a mixed-methods exploratory sequential design. Mixed-methods research combines qualitative and quantitative elements to broaden and deepen the research to garner a deeper understanding and validation (Schoonenboom & Johnson, 2017). A mixed-methods research design is better than a single method because it delivers a comprehensive view of the researched area (Mertens, 2012); using a mixed-method exploratory sequential design allows the researcher to gather data from various sources to inform the research.

Mixed-methods exploratory sequential design starts with a qualitative research process that gathers data from participants, followed by data analysis, informing the structured interview questions and quantitative strand (Creswell & Creswell, 2018; Ozkale & Kanadli, 2021). The qualitative research data and subsequent analysis inform the instrument development for the quantitative phase, and the quantitative data is then analyzed (Creswell, 2015; Ozkale & Kanadli, 2021; Schoonenboom & Johnson, 2017). The current study's data collection involved a qualitative survey, structured interviews, and a quantitative survey (see Figure 5).

Figure 5

Research Study Procedure



Note: Adapted from *A Concise Introduction to Mixed Methods Research*, by J. W. Creswell, 2015, p. 41. Copyright 2015 by SAGE.

The data collected as part of the current study supported identifying the critical leadership characteristics that foster intra-organizational collaboration and enable efficiently allocating personnel to projects and daily operations. A mixed-methods exploratory sequential design was appropriate for this research, providing an opportunity to collect data from the research site's employees, validating intra-organizational collaboration processes through structured interviews with managers, and having employees rank the critical leadership criteria for fostering intra-organizational collaboration and efficiently allocating limited personnel resources.

The research site was a California public agency that provides flood control to protect county residents, water for crops, and electric power to its customers. Collecting data through the qualitative survey assisted identifying themes and potential discrepancies. The qualitative structured interviews helped identify criteria critical for collaboration and efficiently allocating resources, while elaborating on current processes and providing clarification. The qualitative strand informed the quantitative survey instrument to obtain the employees' ranking on the critical criteria. This process is robust and engaged participants to formulate criteria to enhance intra-organizational collaboration and validate the essential elements of collaboration and efficient resource allocation (Creswell & Creswell, 2018).

A mixed-methods research design allows the researcher to explore the research topic through a qualitative method to formulate essential questions (Creswell & Creswell, 2018; Hidalgo et al., 2020). For the current study, the process provided information to identify the leadership characteristics essential for creating a collaborative culture and effective personnel allocation from the employees' perspective. The quantitative method is based on the output from the qualitative phase. It provided the critical leadership characteristics for creating a collaborative culture and effective personnel allocation that the agency's employees ranked by

importance. In the final phase, the quantitative data identified the critical characteristics for leaders to create a collaborative culture, from the employees' perspective.

Description of Participants

For this single case study, the researcher used a public agency that employs 99 people; the whole population of employees, both managers and non-managerial staff, were included. The survey instrument sought input from all employees; management employees from the different business units were then purposefully selected for structured interviews. The goal was to interview up to 12 management personnel or until saturation was achieved in identifying the themes for the leadership characteristics needed for creating a collaborative culture and allocating human resources efficiently. The research site has four business units: power systems, communications, water resources, and administrative services. The two largest business units were power systems and administrative services. Interviewing up to 12 management personnel (or until saturation was achieved), purposefully selected based on organizational role, was intended to provide sufficient reach to gather data. Including all the business units was intended to allow individuals from each area to share their perspectives and bring together the units needed for decision making. Table 4 provides information on the research participants based on the data collection technique.

Table 4

Research Participants and Data Collection Instrument

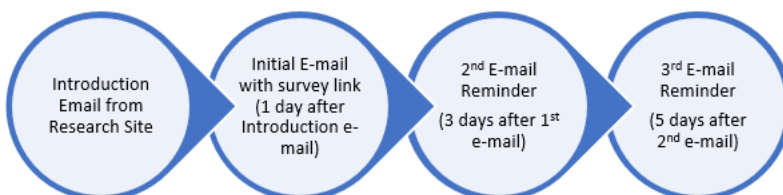
Research participants	Qualitative survey	Qualitative structured interviews	Quantitative survey
Organization's employees (non-managerial and managerial)	Yes	N/A	Yes
Organization's managers	Yes	Yes	Yes

Sampling Design

The researcher administered a qualitative survey to all employees, conducted structured interviews with eight managers, and administered a quantitative survey to all employees. The sampling strategy for the qualitative and quantitative surveys used a convenience sample. The qualitative survey sought input from all employees to identify the critical leadership skills to develop a collaborative culture to help allocate employees' time. The sample size relied on voluntary participation. Figure 6 depicts communication with the research participants about the survey instruments. An introductory email explaining the study was distributed by the research site's human resources department, followed by an email from the researcher describing the research that will include informed consent on the first page of the survey and a link to the survey (see Appendix A). The study sought responses from all employees across business units with a mix of management and non-management and diverse employment lengths.

Figure 6

Survey Contact Process



Data Collection Methods

Qualitative Strand

Data collection occurred through an online survey for the qualitative component; an introductory email explaining the study provided a link to the survey (see Appendix A). The introductory email was distributed by the research site's human resources department and was followed by an email from the researcher describing the research, which included a link to the qualitative strand survey (see Appendix B). Informed consent was included on the first page of

the survey. The researcher sent two follow-up emails to respondents as reminders to complete the survey. The questionnaire sought respondents' perceptions about collaboration within the organization and how leaders could develop a collaborative culture to assist in allocating human resources.

The qualitative questionnaire was prestructured (i.e., a deductive survey) to identify main themes to determine which predefined characteristics existed in the study's population. The questionnaire was a nonstandardized survey instrument due to its specificity to the research site. The questionnaire was designed to avoid misleading or biased language by minimizing any deceptive language or influencing responses, to gather the respondents' answers from their perspectives. Therefore, the constructs were broad to ensure the answers were not traceable to an individual respondent.

The survey instrument was structured to provide confidentiality by not collecting the IP addresses of respondents, protecting their identities from being associated with their responses. The questionnaire was confidential and stored on a secure site with access (via a passcode) limited to only the researcher.

The structured interviews with the research site's managers solicited clarification on the qualitative survey results and participants' understanding of intra-organizational collaboration and how they collaborate to achieve strategic objectives (see Appendix C for protocol and questions). The interview questions were designed to avoid misleading or biased language by minimizing any deceptive language or influencing responses, to gather respondents' answers from their perspectives. Interviews were recorded and stored on a secure site; to maintain confidentiality, access (via a passcode) was limited to only the researcher. The recordings were

transcribed, identification information removed, and then the recordings were deleted. These constructs ensured that answers were untraceable to an individual respondent.

Quantitative Strand

The quantitative survey was separate and followed the same procedures as the qualitative survey. The data collection was via SurveyMonkey; an introductory email explained the study, informed consent (see Appendix D for consent forms), and provided a link to the survey (see Appendix A). The researcher sent two follow-up emails to respondents as reminders to complete the survey. The questionnaire asked respondents to rank the critical leadership characteristics for creating a collaborative culture identified in the qualitative survey and structured interviews. The questionnaire for the quantitative survey (see Appendix E) incorporated themes identified in the qualitative research strand.

The quantitative questionnaire was developed from the themes identified in the qualitative research elements. The questionnaire asked participants to rank the critical leadership skills needed to create a collaborative culture. The questionnaire was designed to avoid misleading or biased language by minimizing any deceptive language or influencing responses, to accurately gather the respondents' perspectives. The survey instrument was structured to provide confidentiality by not collecting IP addresses, so that participants' identities could not be associated with their responses. The questionnaire was confidential and stored on a secure site, with access (via a passcode) limited to only the researcher. Therefore, the constructs were broad to ensure the answers were untraceable to an individual respondent.

Measurement and Instruments

This study collected data through a qualitative survey instrument, structured interviews, and a quantitative survey instrument to rank the critical leadership characteristics for creating a

collaborative culture within an organization. The qualitative questionnaire asked how the respondents collaborated within the organization, what helped with intra-organizational collaboration, participants' role within the organization, their employment length, and whether they were management or non-management. The questionnaire was a nonstandardized survey instrument due to its specificity to the research site. The questionnaire was designed to avoid misleading or biased language by minimizing any deceptive language or influencing the responses, to accurately gather participants' perspectives. The survey instrument was structured to provide confidentiality to respondents, protect their identities from being associated with their responses. Therefore, the constructs were broad to ensure that answers were untraceable to an individual respondent.

The structured interviews with the research site's managers solicited clarification on the qualitative survey results, participants' understanding of internal processes, and their interaction with the strategic plan. The interview questions focused on how the managers create a collaborative culture, how they collaborate within the organization, and what assists with intra-organizational collaboration. The interview questions were designed to avoid misleading or biased language by minimizing any deceptive language or influencing responses, to gather answers from respondents' perspectives. The interviews were recorded; the survey instrument was structured to provide confidentiality to respondents, protect their identity from being associated with their responses. Therefore, the constructs were broad to ensure that answers were untraceable to an individual respondent.

Reliability and Validity

Validity for any study is essential and requires the researcher to gather diverse perspectives to understand the data, interpret findings, and fully develop themes (Zohrabi, 2013).

The researcher must focus on the data points to confirm that the overall findings are not compromised due to a narrow focus or missing key points. Gathering data consistently to review and evaluate themes during a study, while not interjecting the researcher's perspective, is essential to validity of the overall findings (Creswell & Creswell, 2018). Validating a study requires forethought and a critical review by the researcher not to intuit that one element is more important than another (Roberts, 2012).

Qualitative Strand

Qualitative Survey Instrument

To validate the data collected using the qualitative survey instrument, the researcher utilized an audit trail and a second person verified the themes to ensure the trustworthiness of the research method and procedures. For the audit trail, the researcher detailed the data collection, analysis, and interpretation of the data process. The researcher utilized a second person to verify the themes, interpretations, and conclusions to assist with trustworthiness.

Structured Interviews

To validate the data collected during the structured interviews, the researcher utilized an audit trail and member checking to ensure the trustworthiness of the research method and procedures. The researcher detailed the audit trail's data collection, analysis, and interpretation. To assist with trustworthiness, the researcher utilized member checking by sharing the data, interpretations, and conclusions with the research site participants, allowing them to correct errors, clarify, and provide additional information.

Quantitative Strand

To validate the data collected via the quantitative survey instrument, the researcher utilized an audit trail to tabulate the criteria that participants ranked to ensure the trustworthiness

of the research method and procedures. For the audit trail, the researcher detailed the data collection, analysis, and interpretation of the data process. A second person verified counts, interpretations, and conclusions to assist with trustworthiness.

Researcher Bias

All researchers need to “recognize that they explicitly identify reflexively their biases, values, and personal backgrounds, such as gender, history, culture, and socioeconomic status that shapes their interpretations formed during the study” (Creswell & Creswell, 2018, p. 183). However, a researcher’s personal and professional experiences, qualities, and expertise can also enhance the research (Creswell & Creswell, 2018). The researcher for this study has extensive experience in California local government, risk management, and investigation. The researcher’s background includes working as an executive in local government, as a risk management director in local government, and with private companies responsible for conducting investigations.

The researcher is a risk management consultant for the research site, providing advice on project insurance, contractual requirements, and training on risk analysis. The researcher’s experience provides an understanding of the research site’s operations and the roles of different business units. Even with these experiences, the researcher recognizes that personal experience and biases can influence interpretation of the data based on those experiences and prior information (Fàbregues et al., 2021; Zohrabi, 2013). Therefore, the researcher conveyed to participants throughout the process that the researcher’s role was to gather data, triangulate the information through the surveys and interviews, reduce bias, and share the data appropriately while reflecting the participants’ information and not the researcher’s personal experience (Fàbregues et al., 2021).

Ethical Considerations

Before initiating the study, the Franklin University Institutional Review Board (IRB) approved the research. The researcher disclosed any conflicts as required through a conflict-of-interest form. Participants completed a consent form, and the researcher assigned a code to each participant to ensure the final report and interview transcripts contained no personal identifiers. During audio recordings, the researcher labeled the participants by a de-identified participant identifier documented when obtaining the participant's written consent or agreement to participate. Only the researcher had access to this information. The research therefore presents the participants' responses respectfully and anonymously.

The researcher protected data from the surveys and interviews via password protection, limit access (i.e., only the researcher), and did not disclose any information connected to the individual (Franklin University IRB, 2020). The informed consent form (see Appendix D) informed participants about the research and gained their consent. At each stage of the study (i.e., qualitative survey, structured interviews, quantitative survey) the research project was explained to participants and their consent to participate obtained. For example, prior to scheduling the structured interviews, an initial email was sent to participants explaining the research purpose and seeking their consent to participate. Before starting an interview, the researcher again explained the research, and sought the participant's consent to participate and allow the conversation to be recorded.

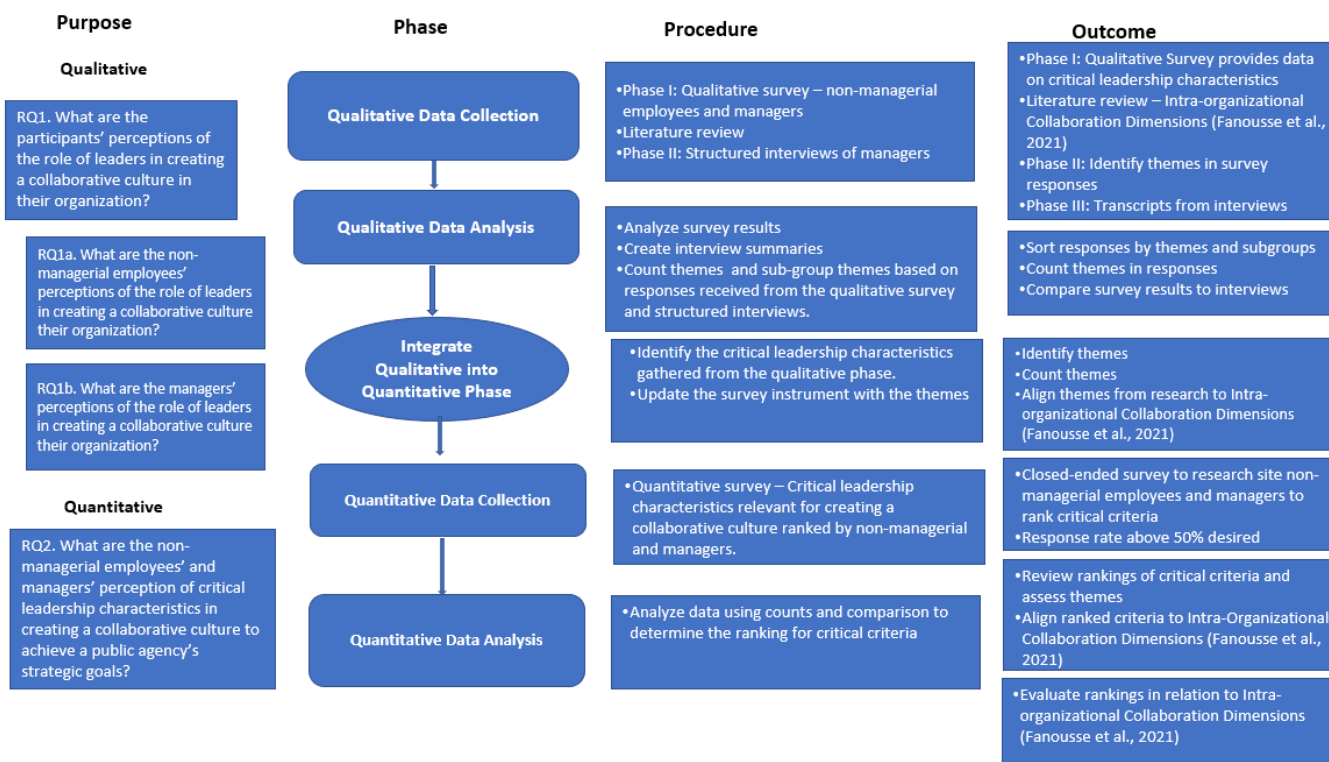
As discussed in the Researcher Bias section, all researchers need to “recognize that they explicitly identify reflexively their biases, values, and personal backgrounds, such as gender, history, culture, and socioeconomic status that shapes their interpretations formed during the study” (Creswell & Creswell, 2018, p. 218). However, researchers' personal and professional

experiences, qualities, and expertise can also enhance the research (Creswell & Creswell, 2018). The researcher for the current study has extensive experience in California local government, risk management, and investigative experience. The researcher's experience includes working as an executive in local government and as a risk management director in both local government and for a private company responsible for conducting investigations. This experience allowed the researcher to understand the research site's operations, how they may operate, and the roles of different business units. Recognizing that personal experiences and biases could influence interpretation of the data (Zohrabi, 2013), the researcher conveyed to participants throughout the process that the researcher's role was to gather data, triangulate the information through the surveys and interviews, reduce the bias, and share the data appropriately while reflecting the participants' information and not the researcher's personal experience (Fàbregues et al., 2021).

Data Analysis Procedures

Data analysis occurred throughout the study based on the design and was done by the researcher with assistance from a second researcher. The data collection and analysis plan (see Figure 7) was refined as the researcher reviewed data from the qualitative survey to draft the structured interview questions, to ensure that the themes were identified and tied to the research questions (Fetters, 2019). The themes identified in the qualitative survey and structured interviews informed the quantitative survey themes for ranking. Data analysis followed the seven steps of the mixed-methods research process outlined by Fetters (2019). The researcher analyzed the identified themes through the lens of the intra-organizational collaboration dimensions (Fanousse et al., 2021), specifically collaborative relationships and collaborative leadership.

Figure 7

Data Collection and Analysis Plan

Note. Adapted from *The Mixed Methods Research Workbook Activities for Designing, Implementing, and Publishing Projects* by M. D. Fetters, 2020, pp. 78–79. Copyright 2020 by SAGE.

The researcher analyzed data collected at three different times. The qualitative survey instrument for collecting data from the research site employees was used to identify themes and was analyzed first. The structured interview questions were developed from themes identified in the qualitative survey of all employees. The researcher used the data collected from the qualitative survey and structured interviews to identify themes and critical leadership characteristics that create a collaborative culture and to develop the quantitative survey instrument to rank the criteria. Analysis was performed at each data collection point to inform development of the data collection instrument.

Qualitative Strand

The researcher used SurveyMonkey for the qualitative survey instrument and analysis. Once the survey was closed, the researcher downloaded the data to a secure file on the researcher's OneDrive, encrypting and securing by a password only accessible to the researcher. The researcher used Excel and Dedoose to sort, collate, and provide initial interpretation of the structured interview data . Data consolidation through Excel and Dedoose provided an integrated analysis process. The researcher used counts for the themes identified in the qualitative strand for the data analysis. After identifying the themes, the researcher filtered the themes through the lens of the intra-organizational collaboration dimensions (Fanousse et al., 2021), specifically collaborative leadership and collaborative relationships.

Quantitative Strand

The quantitative survey instrument followed the same procedures as those for the qualitative survey. Further analysis was done on the data collected in the quantitative process using SurveyMonkey. Once the survey was closed, the data were downloaded to a secure file on the researcher's OneDrive, encrypted and secured by a password accessible only to the researcher. The rankings obtained from the quantitative strand were counted as the most and least important for effective collaboration as perceived by the public agency's managers and non-managerial employees.

The researcher will provide the research site with a copy of the dissertation without identifying participants. The data, analysis, and other information gathered during the study are confidential and maintained consistent with Franklin University's data security guidelines and other Franklin University processes (Franklin University IRB, 2020). After completing the research, the data collected during the study were destroyed. The recorded interviews (video and

audio) were deleted immediately after the transcripts from the interviews were completed. The master list or key code were stored separately from the data and destroyed as soon as possible. Any contact lists, recruitment records, or other documents that contained participant personal identifiable information were destroyed when no longer required for the research.

Limitations

This study was limited to one organization with a small population. However, results from the study will assist the research site by identifying critical leadership skills, potential training, and process improvement areas to create a collaborative culture through intra-organizational collaboration and allocating limited personnel resources. The study also may be helpful for other organizations by providing insights into intra-organizational and inter-team collaboration for resource allocation and ensuring that organizations achieve their strategic objectives.

Summary

Chapter 3 described the research process and framework. The research process solicited information from the employees through qualitative and quantitative questionnaires and structured interviews with managers. The research gathered information to understand the organization's current collaboration and resource allocation processes while identifying the critical leadership criteria for creating a collaborative culture. The researcher's experience with the research site and government agencies facilitated a deeper understanding of how the organizations can allocate their resources effectively and the importance of intra-organizational collaboration, which aligned with the mixed-methods exploratory sequential design process.

Approval from the Franklin University IRB and written approval from the research site was obtained before starting the research. Research was conducted at a local water agency in

California, and recruitment occurred by emailing all employees with purposeful intent. A qualitative survey questionnaire obtained employees' perspectives on developing a collaborative culture. After receiving the qualitative questionnaire results, structured interviews with managers validated the information and provided insight into creating a collaborative culture. A quantitative questionnaire was sent to all employees to rank the critical criteria for themes identified as the critical leadership skills needed to create a collaborative culture.

Data analysis involved coding the qualitative survey results and structured interview information to identify themes and the critical criteria for creating a collaborative culture. The study employed different methods (i.e., documentation of procedures and protocols, member check-ins to verify themes, processes to confirm themes garnered from the data) to ensure validity, reliability, and trustworthiness. Chapter 4 provides additional detail on data collection and analysis, and the findings from the study are presented in Chapter 5.

CHAPTER 4: DATA COLLECTION AND ANALYSIS

This chapter discusses the data collection and analysis. The study used a mixed-methods exploratory sequential design to identify the criteria that leadership can utilize to create a collaborative culture for allocating limited resources, by collecting employees' perceptions of the role of leaders. The data collection instruments used for the research were a qualitative survey, structured interviews, and a quantitative survey, which the researcher developed.

The qualitative survey consisted of 20 questions, 17 open-ended questions soliciting the participants' perceptions on collaboration and resource allocation within the organization, and three demographic questions. The structured interview consisted of 11 open-ended questions soliciting managers' perceptions on collaboration, resource allocation, and their processes for collaboration and allocating resources. The quantitative survey instrument listed the 10 themes developed from the qualitative survey and interviews. The quantitative survey requested participants to rank the themes based on their importance (1 = most important, 10 = least important) as critical leadership characteristics to foster intra-organizational collaboration and efficiently allocate personnel to projects and daily operations.

This chapter discusses the data collection and analysis process and presents some general conclusions. The study included qualitative and quantitative data collected using a qualitative survey, structured interviews, and a quantitative survey. The research summarizes data collection and analysis for each instrument and integrates the data during analysis.

Description of the Sample and Recruitment

The research site was a California public agency with 99 employees. The population consisted of all managerial and non-managerial employees for the qualitative and quantitative

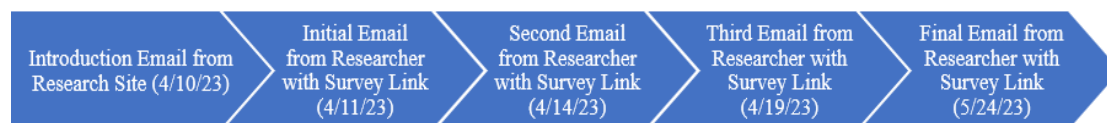
surveys and 19 managerial employees for the structured interviews. Response rates were around 21% for the qualitative survey, 42% for interviews, and 23% for the quantitative survey.

Qualitative Survey

The researcher solicited all employees at the research site to participate in the qualitative survey. The research site sent an introductory email to all employees introducing the research and the researcher. The researcher sent an initial and three follow-up emails to each employee seeking their participation in the research using the email list provided by the research site (see Appendix A). Figure 8 illustrates the process and provides the timeline.

Figure 8

Qualitative Survey Recruitment Emails



The response rate for the survey was 21% based on 99 employees: 51 employees opened the qualitative survey link, 22 employees initiated the survey, and 21 employees completed the survey. The response rate for individuals opening the survey was 52%, with a 41% completion rate for those opening the survey. There were 11 non-management employees and 10 managerial employees responding to the survey.

Structured Interviews

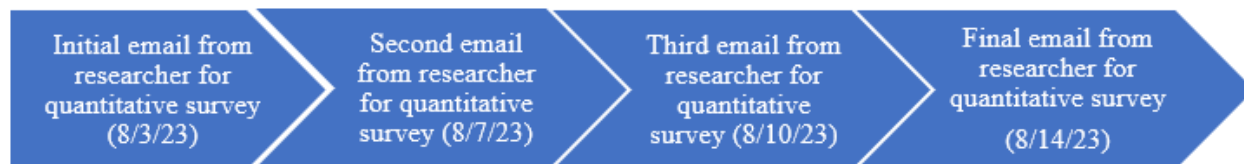
The researcher solicited managerial employees at the research site to participate in the structured interviews. The researcher sent an initial and three follow-up emails to the managerial employees seeking their participation in an interview (see Appendix A). Figure 9 illustrates the process and provides the timeline.

Figure 9*Recruitment Email Sequence Sent to Managerial Employees*

Ten managerial employees opened the survey link for the structured interviews, which included one duplicate, and eight employees agreed to participate in the research. The response rate to participate in the structured survey was 42%, based on 19 managerial employees and eight participating in the structured interviews. Eight interviews resulted in a saturation in managers' perceptions of collaboration and resource allocation.

Quantitative Survey

The researcher solicited all employees at the research site to participate in the qualitative survey. The research site sent an introductory email to all employees introducing the research and the researcher. The researcher sent an initial and three follow-up emails to each employee seeking their participation in the research (see Appendix A). Figure 10 illustrates the process and provides the timeline.

Figure 10*Recruitment Email Sent to All Employees*

The response rate for the quantitative survey was 23%, with 30 individuals opening the survey and 23 out of 30 individuals completing the survey. The primary question in the quantitative survey focused on ranking the critical leadership characteristics for creating a

collaborative culture to assist the organization with allocating its limited resources. Twenty-three individuals responded to the primary question, and three provided additional information on collaboration and allocating personnel in the organization.

The response rates were lower than desired for the qualitative and quantitative surveys. The response rates were more than likely affected by the time commitment needed, the questions themselves, and concerns about confidentiality due to using a worksite as the research site (Greenberg & Dillman, 2021; Lund, 2021). However, using three data collection instruments helps to triangulate the data and assists with understanding the data collected while identifying the critical criteria for leadership to create a collaborative culture and assist with resource allocation.

Demographics of the Sample and Data Collection

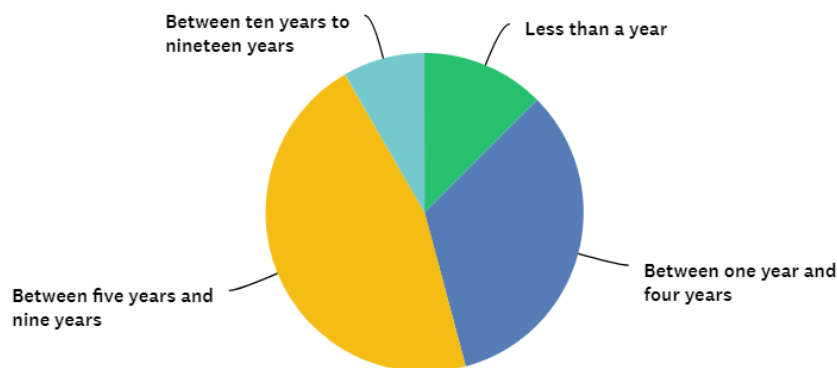
The data collection instruments used for the research were a qualitative survey, structured interviews, and a quantitative survey, which the researcher developed. The qualitative survey consisted of 17 open-ended questions soliciting the participants' perceptions on collaboration and resource allocation within the organization and three demographic questions. The structured interview included 11 open-ended questions soliciting managerial employees' perceptions of the key characteristics needed to create a collaborative culture and allocate the organization's limited resources. The quantitative survey instrument listed the critical leadership characteristics identified in the qualitative strand needed to create a collaborative culture and allocate the organization's limited resources for the respondents to rank from most important (1) to least important (10).

Qualitative Survey

The qualitative survey demographics collected focused on whether an employee was management or non-management, the length of time they had worked at the research site, and their business unit (department). The responses were 47.6% management and 52.4% non-management for the qualitative survey. The majority of respondents, 13 out of 21, had been employed from 5 to 9 years at the research site (see Figure 11).

Figure 11

Qualitative Survey Respondents' Length of Employment



Of the respondents, nine were from the power systems unit, two were from water resources, and 10 were from internal functions (i.e., administration, communications, finance, information technology, purchasing). Further demographic information was not collected due to the small population to protect the respondents' identities. Overall, the responses provided insight from management and non-management employees; participants represented a diverse employment length time and business units.

Structured Interviews

Demographic information for the structured interviews was limited to the interviewees' business unit to protect their identities. All interviewees were management; four were from

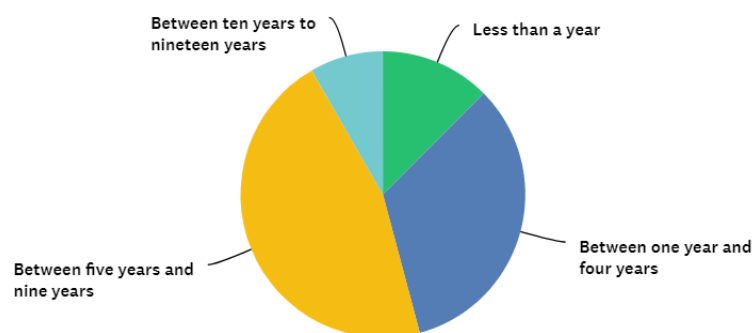
internal functions, three were from power systems, and one was from water resources. Thus, three of the agency's four business units had a representative participating in the interviews.

Quantitative Survey

The quantitative survey demographics collected focused on whether an employee was management or non-management, the length of time they had worked at the research site, and their business unit (department). Most respondents, 11 out of 24, had been employed at the research site for 5 to 9 years (see Figure 12); 11 were management and 13 were non-management.

Figure 12

Quantitative Survey Respondents' Length of Employment



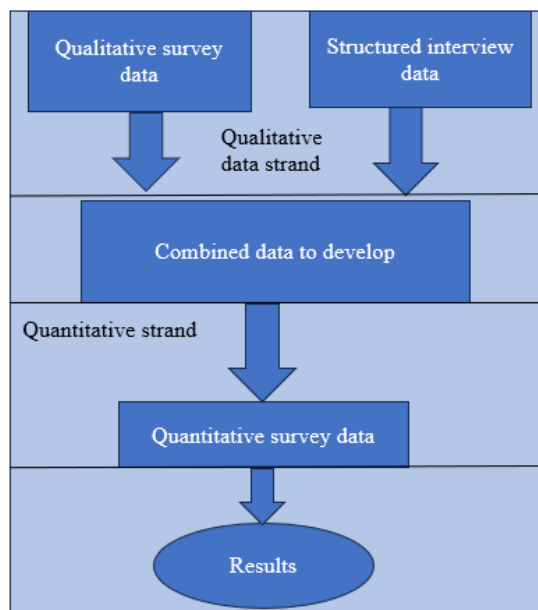
The respondents were from power systems (six), water resources (two), and internal functions (15); one respondent did not indicate business unit. Because the target population (sampling frame) size was relatively small, further demographic information was not collected to protect the respondents' identities. Overall, the respondents provided insight from management and non-management employees and represented a diverse employment length time and three of four business units.

Three of the agency's four business units (i.e., power systems, water resources, and internal functions), were represented and provided insight from the management and non-

management employee perspectives. The qualitative and quantitative survey participants covered different employment periods; the majority had been employed at the agency from 5 to 9 years. The research site has increased its employee count significantly in the past 5 years due to taking responsibility for maintaining and operating the power systems and dam instead of contracting those services.

Data Analysis

The data analysis involved analyzing the data collected and identifying patterns while synthesizing the information. The researcher analyzed the data from the qualitative survey and structured interview questions to identify critical leadership characteristics tied to the research questions for ranking in the quantitative survey. The researcher analyzed the data using content analysis. The data analysis focused on explicit coding in the initial round of coding. The second round of coding identified implicit coding. The researcher analyzed the identified content through the lens of intra-organizational collaboration dimensions (Fanousse et al., 2021), specifically collaborative relationships and collaborative leadership. The final step involved counting the identified themes ranked by the employees in the quantitative survey. Figure 13 shows the data analysis path.

Figure 13*Data Analysis Path*

The researcher analyzed the data collected at two different points in time. The researcher analyzed and coded data collected via the qualitative survey instrument from the research site's managerial and non-managerial employees. The survey results were coded and used to identify the critical criteria that leadership could utilize to create a collaborative culture for allocating limited resources by collecting employees' perceptions of the role of leaders.

After transcribing the recorded structured interviews, the researcher sent transcriptions to the interviewees for their review and clarification. The researcher coded the transcribed interviews and identified the content for the critical criteria that leadership could utilize to create a collaborative culture for allocating limited resources. The researcher combined the qualitative survey and structured interview codes, aligned the codes, and identified the themes from the two datasets.

The researcher reviewed the themes from the qualitative strand (qualitative survey and structured interviews) to identify the leadership characteristics essential for creating a

collaborative culture to develop the quantitative survey instrument for the respondents to rank. The quantitative survey data ranked the critical leadership characteristics to create a collaborative culture for allocating limited resources from the employees' perspective by counting based on rank. The following will review the analysis in more detail for each data collection instrument.

The researcher used qualitative content analysis to identify themes from the qualitative survey and structured interviews. Qualitative content analysis focuses on a systematic coding process that categorizes textual information to determine trends and patterns based on frequency and relationships (Devi Prasad, 2019; Vaismoradi et al., 2013). After identifying the themes, the researcher filtered themes through the lens of intra-organizational collaboration dimensions (Fanousse et al., 2021), specifically collaborative leadership and collaborative relationships.

Qualitative Strand

The researcher used SurveyMonkey to conduct the qualitative survey and Zoom for the structured interviews. Once the qualitative survey closed, the researcher coded the responses using SurveyMonkey and Excel, using explicit and implicit coding. For the structured interviews, the researcher used Zoom and Read.ai to assist with transcribing and storing as a Word document. The researcher coded the structured interviews using Excel and Dedoose. The researcher read all the responses before beginning the coding process. After the first read-through, the researcher coded using explicit coding and allowed implicit coding throughout the process. All data were downloaded into a secure file on the researcher's OneDrive, encrypted and secured by a password accessible only to the researcher.

Qualitative Survey

The researcher reviewed the data from the qualitative surveys after the survey closed. The researcher read the responses three times. The first review entailed reading individual survey

responses and exporting the questions and answers to Excel. The second review involved reviewing each question and all the responses in SurveyMonkey as a group. The researcher coded the data during the second review and identified themes in the third review data after these reviews.

Based on context analysis, the researcher coded using two phases, explicit and implicit. For the explicit coding, the researcher coded based on the responses provided as expressed. The researcher used words or short phrases of meaning to annotate the textual data during the implicit coding. For example, for this response: “I have heard this many times here: We have working managers, which for me is the worst thing you could have because if you’re managing, then you don’t have time to ensure there is collaboration,” the implicit code consisted of collaboration issues: time to collaborate. Collaboration issues was the main code, and time to collaborate the subcode.

Codes were not predetermined but rather identified based on the context of the responses. Identifying broad concepts is necessary before filtering the information more narrowly into codes (Coates et al., 2021). Open coding helps a researcher get a broad view and develop themes after reviewing the codes (Elliott, 2018). The validity of the coding relied on the consistency of the approach and the use of hand-coding in SurveyMonkey for each response.

Analyzing participant responses is necessary to identify patterns in data (Linneberg & Korsgaard, 2019). For the current study, the researcher identified keywords describing the respondents’ statements in the coding process, for example:

- Leadership: “Allowing collaboration and departments to be able to work as needed and support across invisible barriers in the agency to foster collaboration but currently limits.”
- Trust: “Building relationships and trust.”

- Engagement: “Gives everyone a chance to contribute ideas and is willing to make a team-led decision.”

The second phase of coding focused on second-order codes. Focused second-order coding enables analyzing data for patterns based on codes from different data (Locke et al., 2020; Mishra & Dey, 2022). Focused second-order codes are from the concepts and subcategories that provide more focused explanations (Costa et al., 2016). The researcher reviewed the codes and subcodes identified in the initial coding and refined the codes to a more specific explanation. For example, one response to Question 6 (What fosters/limits collaboration in the organization?) was “Conflicting visions or lack of understanding.” For this response, two codes were identified: vision and communication. “Vision” relies on identifying a vision and communicating the vision to all employees. “Communication” involves communicating the vision and ensuring that communication occurs frequently. This response focused on the limits to collaboration and fostering collaboration by recognizing that collaboration occurs when the vision is communicated and understood.

The researcher systematically generated codes through consistency of approach. The researcher initially identified 347 codes, then processed these for redundancies and inaccuracies and categorized them for easy organization. The researcher grouped the codes using SurveyMonkey and Excel. After organizing and cleaning up the codes, the researcher identified 87 codes and 11 code groups. The researcher identified 11 code groups from responses provided by participants to Questions 17 and 18 in the qualitative survey, which were:

- Collaboration
- Communication
- Decision making
- Direction
- Focus

- Goals
- Leadership
- People
- Planning
- Relationships
- Resources

Questions 17 (Based on your answers, in general, what do you think is essential to have in place to encourage collaboration?) and 18 (Is there anything else we should know about collaboration and allocating personnel in the organization?) from the qualitative survey aligned with three questions in the structured interviews. Focusing on these questions assisted the researcher with identifying themes.

Twenty respondents answered Question 17; two participants skipped the question. The researcher focused on Question 17 to understand employees' perceptions of creating a collaborative culture in an organization. The participants identified that a shared vision, open communication, supportive leadership, alignment of goals, and a willingness to collaborate were necessary to encourage collaboration. An example of a response from a non-management employee with 5 to 9 years' experience at the organization is: "Good leaders who are accountable, who participate, who talk with you and not at you. Establish a structure and then empower the employee to make final decisions." The researcher identified leadership and decision making as points raised by the respondent.

Seventeen respondents answered Question 18; nine participants skipped the question or answered "None." Question 18 allowed participants to provide additional information on collaboration and resource allocation in the organization from their perspective. An example of a response from a management employee with 5 to 9 years' experience at the organization is: "I think we have a ways to go for vision, goals, and collaborative efforts to filter throughout the

organization.” The researcher identified leadership, collaboration, and goals as points raised by the respondent.

The code groups were broad and rolled up from the codes. For example, the leadership code group had 45 associated codes (e.g., shared vision, open-mindedness, accountability). After identifying code groups for the qualitative survey, the researcher identified the following themes:

- Create an environment that encourages and allows collaboration.
- Develop staff through coaching and training.
- Communicate frequently and openly.
- Respect employees’ opinions and experience
- Engage employees through open communication, transparency, and honesty.
- Encourage collaboration by prioritizing, emphasizing, and actively collaborating.
- Develop cross-functional and inter-department teams for projects, goal setting, and collaboration efforts.
- Encourage collaboration by prioritizing, emphasizing, and actively collaborating.
- Encourage relationship building across departments, teams, management/non-management, union/non-union, and offices.
- Create a shared vision through communication, engagement, and leadership.
- Connect the organization’s strategic plan and vision with the department and individual goals.
- Create an environment that shares the “why” behind decisions, strategy, vision, and plans.

Structured Interviews

The researcher conducted the structured interviews using Zoom and the transcription service Read.ai. After creating the transcript for each interview, the researcher sent it to the participant to review and make any clarifications or corrections. The researcher reviewed these transcripts initially without coding, reading individual survey responses and exporting the questions and answers to Excel. The researcher loaded the Excel data into Dedoose to code the responses. The coding occurred by reviewing each question and all the responses in Dedoose,

noting any concepts of interest and broad concepts. The researcher coded all the responses using explicit coding and allowed implicit coding. The researcher focused on responses to interview Questions 9, 10, and 11 and compared this information with responses to qualitative survey Questions 17 and 18. The researcher used a consistent approach to validate the coding.

Williams and Moser (2019) emphasized that open coding identifies concepts and themes to better categorize data. The researcher used words or short phrases of meaning to annotate the textual data during the coding process, for example, for the response “A good strategic plan that’s updated and everybody buys into,” the codes consisted of vision: vision setting and strategic plan buy-in. Vision was the main code, and vision setting and vision–strategic plan buy-in were the subcodes.

The first coding phase identified general thoughts and ideas. Identifying broad concepts is necessary before filtering the information more narrowly into codes (Coates et al., 2021). Open coding helps a researcher get a broad view and develop themes after reviewing the codes (Elliott, 2018). Analyzing the participants’ responses is necessary to identify patterns in the data (Linneberg & Korsgaard, 2019).

The researcher identified keywords describing the respondents’ statements in the open coding process. The following are examples of open codes and matched statements.

Leadership:

I think that’s a of the leadership of the collaboration. I think that’s where I see it probably fall apart. More is you have to have somebody that, especially here, right, you’re to have High very intelligent people that from college-educated to not, that are all very intelligent, that are all different walks of life. Environmental. Engineering, maintenance, operations, administrative. You got to get those personalities in a room to collaborate and make a good holistic decision, but if you’re the leader in that room is unable to figure out how to get those personalities to be on the same page, then the collaboration can then be just detrimental to that.

Trust:

So otherwise, I mean generally, and I've said it, collaboration is how an organization works and every successful organization depends on it and it, it involves trusting one another, it involves the right people at the right time, involving folks sometimes that aren't tied to the direct project. Just to look at it, does this make sense? It's a logic check and having the trust to be able to share that with others.

Vision:

And then I'd say a clear vision so that the teams working on the same thing, I mean we're Reach, bringing our part of the process into play, but you know, we, I often equate it to like a bus, right?

The researcher identified 187 codes and 45 code groups. The codes were then processed for redundancies and inaccuracies and categorized for easy organization. The researcher grouped the codes using Dedoose and Excel. After organizing and cleaning up the codes, the researcher identified 44 codes and the following nine code groups:

- Behaviors – employees/leaders
- Communicate
- Decision making
- Organizational
- Resource allocation
- Collaboration
- Culture
- Leaders/leadership
- Planning

The researcher identified 17 themes from the structured interview responses to Questions 9, 10, and 11 based on the codes and code groups:

- Identify the personnel resources needed for the organization, department, and projects through data.
- Develop, communicate, and ensure understanding of the vision for the organization, departments, and teams.
- Make informed decisions by gathering information from employees, departments, and other functions.

- Develop trust within the organization, department, and team.
- Have integrity in communication and action.
- Set the expectation that collaboration is essential in the team, department, and organization.
- Create a culture that encourages discussion and diverse opinions.
- Recognize that mistakes happen and create a culture to learn from mistakes.
- Leaders need to be active listeners.
- Respect diverse opinions, experiences, and skills.
- Allocate personnel and their time at the organizational level.
- Be willing to engage with others in decision-making and planning.
- Develop collaborative relationships within the organization.
- Engage with others at the project development phase to address personnel needs, funding, schedule, and prioritization.
- Develop a project list and prioritize the projects at the organizational level to ensure alignment with the strategic plan.
- Be honest.
- Communicate the “why” behind decision making.

After identifying these themes, the researcher compared the themes identified from the qualitative survey and structured interviews to develop the quantitative survey themes.

Theme Review, Theme Definitions and Names, and Analysis

The theme review, creating theme definitions and names, and writing the analysis consolidated the themes from the qualitative survey and structured interviews. Identifying the themes for the quantitative survey relied on information gathered during the qualitative strand and used the qualitative survey and structured interviews for a global perspective. The final themes identified in the qualitative strand were:

- Develop trust within the organization, department, and team.
- Develop employees through coaching and training.
- Make informed decisions by gathering information from employees, departments, and functions.
- Respect employees’ diverse opinions, experiences, and skills.

- Engage employees through open communication, transparency, and honesty.
- Encourage collaboration by prioritizing, emphasizing, and actively collaborating.
- Create a culture that encourages discussion and diverse opinions.
- Encourage relationship building across departments, teams, management/non-management, union/non-union, and offices.
- Create a shared vision through communication, engagement, and leadership.
- Create an environment that shares the “why” behind decisions, strategy, vision, and plans.

The theme review incorporated the themes from the qualitative survey and structured interviews by merging and refining the themes to generate the themes.

The content analysis disclosed several key themes that highlight employees’ perceptions of the role of leadership in developing a collaborative culture:

Trust. Employees highlighted that mutual trust is essential for creating a collaborative culture and allocating resources. Leaders must develop trust within the team, department, and organization by providing direction, integrity, and accountability and utilizing employees’ strengths, delegating responsibilities and empowering employees to make sound decisions and take ownership.

Coaching and training. Employees referenced the need for leadership to train and coach employees to grow their skills, provide confidence, and allow them to make mistakes. Recognizing that mistakes occur, leaders need to support employees and help them learn from mistakes while providing direction and establishing realistic expectations.

Respect. Employees raised the need for leadership to respect employees’ diverse opinions, experiences, and skills. Leaders should recognize that employees are capable, knowledgeable, and bring a wealth of information to the organization to assist with solving problems or providing insight.

Decision making. Employees believed that leadership needs to make informed decisions by gathering information from other employees, other departments, and other functions. Informed decision making emphasizes collaboration (i.e., is joint decision). Even if the leader makes the decision, employees feel heard and can provide input.

Engagement. Employees indicated that leaders need to engage all employees—not the same employees, but everyone. Engaging employees brings diverse opinions and skill sets across the team and the organization.

Collaboration. Employees identified that leadership needs to encourage collaboration by prioritizing, emphasizing, and actively collaborating. Leaders should lead by example: actively collaborating, removing barriers, and verifying that collaboration occurs with other teams and departments on projects or when solving problems.

Culture. Employees discussed the need for leadership to create a collaborative culture by embedding collaboration into its processes, removing categorizing resources by department or job description, and setting the expectation that collaboration will occur.

Relationships. Employees indicated that leadership needs to develop relationships with employees and encourage employees to develop relationships. Relationships are essential in creating culture, collaboration, and engagement. Leaders need to lead by example and eliminate silos to encourage relationship building.

Vision. Employees emphasized that effective leadership provides a clear vision and direction that aligns with the organization's values. Leaders who communicate a shared purpose and long-term goals create a sense of unity and motivate employees to work collaboratively toward common objectives.

Environment. Employees voiced that leadership needs to create an environment that shares the “why” behind decisions, strategy, vision, and plan. Communicating purpose, expectations, and plans helps to engage employees, reinforce the vision, and achieve strategic objectives.

The qualitative strand content-analysis findings highlighted that leadership plays an intricate role in building and encouraging a collaborative culture. Leaders reinforce the need to collaborate by being role models, communicators, and facilitators. By trusting, engaging, coaching, engaging in informed decision making, respecting, and collaborating, leaders encourage relationship building, develop an environment, and establish a vision conducive to collaboration.

The content analysis underscores the significance of leadership in shaping a collaborative culture within organizations. Participant perceptions highlighted that leadership behaviors and actions influence employees’ willingness to work together, share ideas, and collectively innovate. Organizations prioritizing and developing these leadership attributes are likelier to enhance productivity and drive success by cultivating a collaborative culture.

Quantitative Strand

The researcher utilized SurveyMonkey to conduct the quantitative survey with the themes identified in the qualitative research strand. Once the survey closed, the researcher counted the responses using SurveyMonkey and downloaded the data into a secure file on the researcher’s One Drive, encrypted and accessible only to the researcher via a password. The researcher used counts for the questions based on the ranking in the qualitative strand for the data analysis. The rankings obtained from the quantitative strand were counted as the most and least important for effective collaboration as perceived by the public agency’s managers and non-managerial

employees. Of the 24 respondents, 11 were management, and 13 were non-managerial employees. Based on the number of responses, the researcher focused only on counting each rank for each characteristic and did not use a weighted score.

The researcher identified each characteristic with a short title for a theme (see Table 5). The researcher reviewed the ranking for each characteristic, business unit, employment length, and management and non-management. The rankings were diverse except for the highest-ranked characteristic, Trust. The second highest-ranked characteristics (each identified by five employees) were Decision Making and Engagement.

Table 5

Qualitative Strand Characteristics and Short Title

Characteristic	Short title
Develop trust within the organization, department, and team.	Trust
Develop employees through coaching and training.	Coaching/training
Make informed decisions by gathering information from employees, other departments, and other functions.	Decision making
Respect employees' diverse opinions, experiences, and skills.	Respect
Engage employees through open communication, transparency, and honesty.	Engagement
Encourage collaboration by prioritizing, emphasizing, and actively collaborating.	Collaboration
Create a culture that encourages discussion and diverse opinions.	Culture
Encourage relationship building across departments, teams, management/non-management, union/non-union, and offices.	Relationships
Create a shared vision through communication, engagement, and leadership.	Vision
Create an environment that shares the "why" behind decisions, strategy, vision, and plans.	Environment

The ranking count identified several key themes that highlight employees' perceptions of the role of leadership in developing a collaborative culture. As noted, The highest-ranked theme was Trust; 17 participants ranked it as the most important, three as second highest, two individuals as fourth highest, one as fifth highest, and one as sixth highest.

Six power systems employees responded to the quantitative survey (four non-management employees, two managerial employees). Two power systems employees ranked Trust as the most important, one ranked it second, two ranked it fourth, and one ranked it sixth. (The two managerial employees ranked it as fourth and sixth.)

Of the remaining participants, 15 were internal function (e.g., IT, accounting, purchasing) employees, two were water resources employees, and one was in resource planning. Among this group, there were nine managerial employees and seven non-managerial employees. Eight of the managerial employees ranked Trust as the most important criterion; one listed it as the second most important. Five non-managerial employees identified Trust as the most crucial, one identified it as second most important, and one ranked it fifth.

In reviewing the overall ranking of Trust by non-managerial employees, nine ranked it as their first choice, two as their second choice, one as their fourth choice, and one as their fifth choice. Two non-management power systems employees ranked it as their first choice, one as their second choice, and one as the fourth. Five non-managerial employees ranked it as their first choice, one as their second choice, and one as their fifth choice. See Table 6 for rankings of Trust among managerial and non-managerial participants.

Table 6**Comparison between Management and Non-Management Rankings for Trust**

Ranking	Management	Non-management	Total by rank
1	8	9	17
2	1	2	3
3			0
4	1	1	2
5		1	1
6	1		1
7			0
8			0
9			0
10			0
Total	11	13	24

Among internal function, water resources, and power systems employee participants, there were differences between managerial and non-managerial rankings of Trust. It is possible that these differences could have been due to work requirements in the different units. Length of employment with the organization is another difference and affected how respondents ranked the criterion.

The power systems unit operates the dam and support functions, which creates electricity and requires routine maintenance, daily tasks, and responding to emergency repairs and weather events. Power systems employees include maintenance, engineers, operators, and those performing support functions. One management and two non-management power systems employees had been employed there for between 5 and 9 years, one management and one non-management employee for between 10 and 19 years, and one non-management employee for between 1 and 4 years.

The internal functions unit is responsible for administration, accounting, information technology, and project management. Internal functions employees regularly work with other units and support those functions, and all respondents from this unit had been with the organization for less than 9 years. Two managers and one non-managerial employee had been with the organization for less than 1 year, six non-managerial employees for 1 to 4 years, and seven managerial and two non-management employees for 5 to 9 years.

The ranks for the other nine criteria were more diverse than the highest-ranked characteristic, Trust. Engagement and Decision Making were the second-highest characteristics identified. Seven employees identified Vision as the tenth-ranked characteristic. See Appendix F for the quantitative survey ranking by position, business unit, and length of employment; Table 7 presents Power Systems Management respondent rankings of the critical leadership characteristics.

Table 7*Power Systems Management Employee Ranking*

Ranking	Quantitative strand characteristics
1	Develop employees through coaching and training.
2	Make informed decisions by gathering information from employees, other departments, and other functions.
3	Create an environment that shares the “why” behind decisions, strategy, vision, and plans.
4	Respect employees’ diverse opinions, experiences, and skills.
5	Engage employees through open communication, transparency, and honesty.
6	Develop trust within the organization, department, and team.
7	Encourage relationship building across departments, teams, management/non-management, union/non-union, and offices.
8	Create a culture that encourages discussion and diverse opinions.
9	Encourage collaboration by prioritizing, emphasizing, and actively collaborating.
10	Create a shared vision through communication, engagement, and leadership.

The quantitative survey allowed participants to share information on collaboration and allocating personnel within the organization. Four participants responded to Question 18 (Is there anything else you think we should know about collaboration and allocating personnel in the organization?).

- An internal functions management employee commented that “as the agency grows, it may be time to reorganize where certain job positions exist.”
- An internal functions non-management employee recommended that “gathering information should be sought from different employees, not just the same ones each time there is information to be gathered by management.” Another internal functions non-management employee stated, “It could use improving.”
- A power systems management employee provided insight into their ranking by indicating that “Steps 1-5 are required for step 6 (build trust) and beyond (build culture and vision).

The power systems employee’s comment highlights that developing trust requires time and effort. Leaders are responsible for developing their staff by engaging them, making informed

decisions, and demonstrating respect. Leaders must earn their employees' trust, which is not granted by default (Bond-Barnard et al., 2018). Developing trust within a team and organization requires open and transparent communication, mutual respect, and providing insight for decisions (O.-K. Choi & Cho, 2019). Therefore, intra-organizational collaboration requires time and effort by all parties.

The quantitative strand results suggest that trust plays an integral role in building and encouraging a collaborative culture and that leaders need to develop a culture of mutual trust. Participant perceptions of collaborating within the organization while aligning initiatives and allocating resources suggest that a leader's ability to make informed (i.e., joint) decisions and to engage all employees is a critical leadership characteristic. By trusting, engaging, coaching, making informed decisions, respecting, and collaborating, leaders encourage relationship building, develop an environment, and establish a vision conducive to collaboration.

The rankings underscore the significance of leadership in shaping a collaborative culture within an organization, which requires trust. Employee perceptions highlight how leaders influence collaboration through their actions and can enhance employees' willingness to work together, share ideas, and innovate collectively. Enhancing productivity and driving success requires organizations to emphasize these leadership attributes.

General Conclusions

The current research provides insight into employee perceptions of how leaders influence collaboration through their actions and can enhance employees' willingness to work together, share ideas, and innovate collectively. The leadership characteristics identified assist with enhancing productivity and driving success when leaders make informed decisions and engage all employees in collaborating within the organization while aligning initiatives and allocating

resources. A collaborative culture needs leaders who trust, engage, coach, make informed decisions, respect, and collaborate by encouraging relationship building, developing a collaborative environment, and establishing a vision conducive to collaboration.

The qualitative strand data collection identified 10 themes from the qualitative survey and structured interviews used for ranking in the quantitative strand. The qualitative survey had 21 respondents respond to 17 open-ended and three demographic questions. Eight managers participated in the structured interviews (11 open-ended questions). The themes identified in the qualitative strand were consolidated to 10 specific areas used in the quantitative strand, a survey where respondents ranked the themes.

The themes identified in the qualitative strand were (a) trust, (b) coaching or training employees, (c) decision making, (e) respect, (f) engagement, (g) collaboration, (h) culture, (i) relationships, (j) vision, and (k) environment. There were differences between management and non-management employees, between the power systems and other business units, and some differences based on employment length at the research site. The data reflect differences in perceptions of collaboration based on how business units operate due to silos, job tasks, expectations, and communication.

During the qualitative survey review and structured interviews, participants identified issues with collaboration and allocating resources (i.e., human resources). Two power systems managers discussed collaboration's viability during structured emergencies. They noted that involving everyone required time when time was of the essence to make repairs or address an emergency. In response to the qualitative survey, an internal functions management employee discussed that colleagues supported collaboration during initial project phases but over time their enthusiasm decreased, due to a lack of clarity surrounding roles or project purpose. In

comparison, a power systems non-management employee indicated that teams did not collaborate across job lines due to silos.

Respondents indicated that intra-organizational collaboration needed improvement and could be positive. A non-management employee who did not identify their business unit stated that “collaboration is minimal in our department and is in significant need of improvement.” In comparison, an internal functions non-management employee shared that “collaboration within my department is easy—we work very well together and a high level of trust, so it’s not a big effort. Collaboration is, overall, positive within our department.” A power systems management employee noted that “if communication between departments is healthy and open, and clear goals are communicated by leadership, collaboration is a natural result.” A range of responses shared positive and negative experiences with intra-organizational collaboration.

A common theme from the structured interviews was that the agency had room to improve in allocating resources. A power systems manager suggested that this was challenging due to the research site’s growth, project needs and timelines, and planning for resource needs. Frequently, interviewees indicated that not understanding the resource needs for daily operations, emergencies, and projects affected allocating resources.

In response to the structured interview question seeking additional information about collaboration and allocating personnel within the organization, managers indicated collaborating and allocating personnel were essential to the organization’s performance. A power systems manager stated, “I think any good organization you go to, you’ll find that collaboration is key.” An internal functions manager described the agency as “a better place because collaboration is a core value, and it takes more time sometimes, and it takes more effort, but you get better results.” A power systems manager described collaboration as a great tool, while acknowledging that

collaboration could have a negative effect if employees felt unable to participate in decision making.

The qualitative survey data identified trust as the most critical leadership characteristic in promoting collaboration within the organization while aligning initiatives and allocating resources. The other nine characteristics that respondents ranked had a broader, less decisive response: coaching or training, respect, and environment had at least one response for each rank. Vision was generally perceived as the least important characteristic (seven out of 24 ranked it tenth, and five ranked it ninth).

The research data collected identified themes based on the qualitative survey and structured interviews. The qualitative strand themes were used in the quantitative survey, where participants ranked them as most important to least important on a scale of 1 (most important) to 10 (least important). The results of this research provide insight into employees' perceptions of critical leadership characteristics in creating a collaborative culture to achieve the public agency's strategic goals.

Summary of Results

Creating a collaborative culture requires a leader to develop trust within the group, set expectations, lead by example, and engage and develop the team. The perceptions of participants in the current study align with the conceptual framework of intra-organizational collaboration dimensions (Fanousse et al., 2021): collaborative relationships, collaborative leadership, communicating and sharing information, trust formation, and joint-decision making.

Among these dimensions, the current research focused on collaborative relationships and collaborative leadership. However, trust stood out as a critical issue for intra-organizational collaboration from the employees' perspective. Fanousse et al. (2021) suggested that trust

formation requires an evolution of understanding and exchange of information that occurs over time through interactions between the parties. Collaborative relationships require integrating resources, exchanging information, and transferring knowledge among the group (Fanousse et al., 2021). Collaborative leadership requires top management to continuously guide and bolster intra-organizational collaboration to achieve strategic goals (Fanousse et al., 2021). The employees' perceptions of critical leadership characteristics in creating a collaborative culture to achieve the public agency's strategic goals identified joint decision making and communicating and sharing information as necessary.

Limitations

There are limitations to the research. The research population was drawn from a public agency that provides flood control and power generation and manages water resources in California. The findings are limited to the research site's employees; a more diverse population that provided a more comprehensive range of services might provide more insight. The small sample size also limits the study, making it harder to generalize the findings. Chapter 5 will present and discuss the results, conclusions, and recommendations.

CHAPTER 5: RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter discusses the results, conclusions, and recommendations. The current research provides insight into employees' perceptions of critical leadership characteristics in creating a collaborative culture to achieve a public agency's strategic goals. By collecting employees' perceptions of the role of leaders, the researcher aimed to identify the criteria that leadership might utilize to create a collaborative culture and allocate limited resources. The conceptual framework of intra-organizational collaboration dimensions (Fanousse et al., 2021) was used to filter the research results from the qualitative and quantitative strands.

Results

The current study utilized three research instruments within a mixed methods exploratory research design. The qualitative strand used a qualitative survey and structured interviews. The qualitative survey consisted of 17 open-ended questions and three questions seeking demographic information, and the sample included managerial and non-managerial employees from the research site. The structured interview had 11 open-ended questions and involved interviews with managers. The researcher narrowed down the characteristics identified in the qualitative strand to 10 themes for the quantitative survey. The quantitative strand utilized a quantitative survey requesting the participants to rank the 10 themes from the most important to least important on a scale of 1 (most important) to 10 (least important).

Twenty-two respondents participated in the qualitative survey, and eight managers participated in the structured interviews. There were 24 respondents to the quantitative survey. The structured interviews did reach a saturation point based on the interview responses. The qualitative survey results identified 12 leadership characteristics needed to develop a collaborative culture and allocate personnel to achieve the organization's strategic goals from the

employees' perspective. The structured interviews resulted in the identification of 17 leadership characteristics essential to developing a collaborative culture and effectively allocating personnel to achieve an organization's strategic objectives. The researcher consolidated the qualitative survey and structured interview results, generating the 10 leadership characteristics for the quantitative survey: (a) trust, (b) coaching and training, (c) decision making, (d) respect, (e) engagement, (f) collaboration, (g) culture, (h) relationships, (i) vision, and (j) environment.

For the quantitative survey, participants ranked the 10 leadership characteristics by importance from 1 (most important) to 10 (least important). The quantitative survey listed the themes as statements to provide more information on the themes to assist the participants in the ranking process.

Of the 24 respondents to the quantitative survey, 17 ranked the characteristic of trust as most important (eight out of 11 management, nine of 13 non-management employees). The two power systems managers ranked it as fourth and sixth, respectively. The power system manager ranking it as sixth reflected that building trust requires coaching and training, decision making, respect, environment, and engagement to occur first. Coaching and training, respect, and environment varied in ranking of 1 to 10 based on the 24 respondents. The remaining characteristics were not distinguishable in ranking based on the responses. Decision making and engagement each received five responses for the second most important. However, three other characteristics received at least three responses for second most important. The ranking results reveal trust as the most important and vision as the least important. There were differences in rankings based on the business unit and whether employees were management or non-management.

Additional Observations

Identifying the critical leadership characteristics from employees' perspectives that help create a collaborative culture to assist organizations with allocating limited resources is broad. Narrowing the question to the most essential characteristic a leader needs to create a collaborative culture might provide more clarity. However, organizations must recognize that a collaborative culture requires leaders to set the direction and develop the strategies to achieve it, align personnel through communication, obtain their commitment, and motivate and inspire them by providing purpose and engaging them (Kotter, 1990). Top executives must provide employees with the structure, resources, and vision to achieve their objectives, including creating a collaborative culture (Barnard, 1938). Removing silos, eliminating barriers to exchange ideas freely, and reinforcing the need for the organizational elements to work together to increase efficiency and effectiveness is essential for performance (Fanousse et al., 2021).

Discussion of Findings

The findings of this study, which collected employees' perceptions of the role of leaders, identify trust as an essential criterion that leadership can utilize to create a collaborative culture for allocating limited resources. Participants identified engagement and decision making as the following highest criteria. This section discusses the leader's role in developing trust, engagement, and decision making to create a collaborative culture.

"Trust" within the organization, department, and team means that employees trust the leader and the leader trusts employees. Developing trust requires work and is ongoing. Fanousse et al. (2021) identified seven outcomes from trust formation: (a) an open communication work environment, (b) cooperation among diverse functional areas, (c) high team spirit, (d) effective

risk management, (e) novel idea generation, (f) effective knowledge acquisition, and (g) effective knowledge transfer (Fanousse et al., 2021).

Improving intra-organizational collaboration requires leaders to create an environment that generates trust (Zak, 2017). To generate trust, leaders must provide clear direction and resources and empower employees to achieve their goals (Zak, 2017). Creating positive relationships, making informed and knowledgeable decisions, and demonstrating consistency by leading by example and following through are essential for a leader to develop trust (Zenger & Folkman, 2019). As Burkus (2020) noted, trust is crucial to team culture. Leaders build trust by being vulnerable, communicating reasons behind decisions or actions, allowing employees to determine how to achieve objectives, and delegating decision making to the team (Burkus, 2020).

Frei and Morriss (2020) identified authenticity, logic, and empathy as being the root of trust. To build trust, humans need to connect with the authentic person—and leaders who share their experiences, fears, and challenges with others enhance authenticity (Frei & Morriss, 2020). Employing logic during decision making through consistency, gathering information from different sources, and sharing the basis for decision making develops acceptance of the leader's judgment. Frei and Morriss recognized that to create trust, leaders need to show that they care for their employees and want to develop a connection (i.e., empathy). A breakdown in authenticity, empathy, or logic can result in a loss of trust (Frei & Morriss, 2020).

To engage employees, leaders must create an environment that develops employees' enthusiasm and dedication, which in turn strengthens the organization and improves productivity. Organizational culture influences employee engagement by recognizing, developing, and respecting employees and their contributions (Ababneh, 2020). Employee

engagement is developed and enhanced through empowerment, accountability, and stewardship (Sousa & van Dierendonck, 2015).

Collaboration requires engaged employees who are active participants and support the collaboration priorities and outcomes (Calancie et al., 2021). Barrick et al. (2015) emphasized that organizational engagement is relevant to firm performance and relies on organizational members to buy in—physically, emotionally, and cognitively, which is collective engagement. Encouraging collaboration enables an organization to innovate and grow, and requires leaders to identify, acknowledge, and leverage inclusive perspectives; this is authentic engagement (Colberg, 2018). Colberg (2018) emphasized that engagement depends on organizations and leaders listening and learning from and investing in employees, transparent communication, and caring and connecting internally and externally. Building relationships across departments and enhancing intra-organizational collaboration is achieved by engaging all employees (Barrick et al., 2015; Colberg, 2018).

Decision making requires engaging the stakeholders, gathering information, and making an informed decision. Recognizing that decision making needs to involve the appropriate parties associated with the issue helps make timely, informed decisions (F. Ali & Haapasalo, 2023). Team decision making evolves as the team builds trust based on past performance, and the team composition impacts decision quality (Zhu et al., 2020).

Informed decision making is essential to successful leadership and requires soliciting input from others (Moon, 2021). Knowledge management is crucial to informed decision making and requires intra-organizational collaboration to share information and trust among group members (Abubakar et al., 2019). Engaging with others allows leaders to learn from past

experiences (their own or their peers') and to make informed decisions and is influenced by the organization's decision-making culture (Marchisotti et al., 2018).

Leadership is essential for collaboration and relies on informal and formal leaders (Bryson et al., 2015). Creating a collaborative organizational culture requires leaders who engage, inspire vision, and motivate (Dula & Tang, 2021). Leadership assists with collaborative efforts by sharing the purpose, inspiring others to join the effort to achieve the purpose, creating adaptive systems and processes, generating trust and optimism, developing others to lead, and fulfilling the purpose (Bennis, 2007). Leadership involves defining the purpose of an endeavor and bringing together individuals who understand the purpose and desire to achieve it (By, 2021).

Organizational culture evolves based on leadership at the organization, department, division, and team levels (Steinhoff et al., 2019). Each work group has its own culture, which can affect intra-organizational collaboration. Organizations rely heavily on teams to achieve their objectives (Reiter-Palmon et al., 2021). Teams rely on disparate elements working together to achieve their purpose or objectives based on trust and systems (O.-K. Choi & Cho, 2019). Intra-organizational collaboration requires leadership to inform the strategy, allocate limited resources, and ensure teams have the expertise and resources to fulfill the purpose (Darling, 2017). The findings of the current study reveal that intra-organizational collaboration needs employees to trust the leaders, be engaged, and be comfortable with the implemented decisions.

Recommendations for Future Research

The current research provides insights on employee perceptions but was limited to a single organization. Future research on employee perceptions of critical leadership characteristics in creating a collaborative culture to achieve a public agency's strategic goals

could focus on a broader range of public agencies. Another option would be to focus on a department or division in similar organizations to gain insight into how employees from different organizations identify the leadership characteristics that create a collaborative culture.

Broadening the research to a specific department or division within similar organizations or a specific function within multiple organizations, with a larger sample, may provide richer information. Focusing on a specific department, division, or function provides the opportunity to compare results from similar respondents to better understand the leadership characteristics needed for creating a collaborative culture in similar organizations. The findings from this type of research could provide information to organizations seeking to enhance their intra-organizational collaboration with areas to focus on developing their leaders, setting expectations, and increasing communication.

In addition, future research could reduce the number of questions in the qualitative survey and structured interviews to increase participation. The number of questions or the time requirement could have limited the response rate; reducing the time needed to participate might increase the participation rate and enhance the research. Another option would be to use the quantitative survey as a single instrument and reduce the number of items to rank to five, which might also increase the participation rate.

Practical Implications

The current research provided the research site with information on how collaboration was currently working in the organization and identified ways the agency might enhance intra-organizational collaboration. The research highlights differences between three of the four business units (i.e., power systems, internal functions, water resources) regarding how and when employees collaborate and their perceptions about collaboration. The management participants

indicated that they were striving to improve intra-organizational collaboration and allocate personnel. The current research identifies potential training areas, such as developing a definition of *collaboration* so that everyone understands and is trained on the expectations surrounding how and when to collaborate.

Another opportunity identified by the study is to train managers on the intra-organizational dimensions (Fanousse et al., 2021) to reduce the uncertainty around projects and set expectations on collaboration to assist with delivering on projects, daily operations, and in emergencies. The participants understood that collaboration is important to the organization and enhances results, while also identifying areas that could be enhanced and roadblocks that could be removed. Intra-organizational collaboration occurs organically, and identifying ways to enhance collaboration through improving systems within the organization may increase performance and reduce uncertainty.

Theoretical Implications

The theoretical implications are to seek input from employees on intra-organizational collaboration and utilize mixed-methods research techniques. Mixed-methods research provides more robust data on the need for leadership to create a collaborative culture that supports intra-organizational collaboration. The current research aligns with the intra-organizational collaboration dimensions (Fanousse et al., 2021) and suggests that trust formation is foundational to creating a collaborative culture. Further research on trust formation, joint decision making, and engagement are necessary to expand the knowledge on creating a collaborative culture and supporting intra-organizational collaboration.

Summary

This research provides insight into employee perceptions of leadership characteristics critical for creating a collaborative culture to achieve the public agency's strategic goals. The research used collaboration theory (Gray, 1985; Wood & Gray, 1991) and the conceptual framework of intra-organizational collaboration dimensions (Fanousse et al., 2021) to evaluate results from the qualitative and quantitative strands. Gray's seminal work on collaboration theory (1985; 1989), which Wood and Gray (1991) refined the definition of collaboration theory while focusing on inter-organizational collaboration. It should be noted that the elements of inter-organizational collaboration are adaptable to intra-organizational collaboration (Bedwell et al., 2012).

The current study, by collecting employees' perceptions of the role of leaders, aimed to identify the criteria that leadership can utilize to create a collaborative culture for allocating limited resources. Solving problems by collaborating requires trust and authority for success (Suryanarayanan et al., 2018). Developing intra-organizational trust requires leaders to be transparent in their communication (Cunningham et al., 2020), develop interpersonal relationships (F. Ali & Haapasalo, 2023), and empower team members (Fanousse et al., 2021).

This study's findings regarding employee perceptions of the critical leadership characteristics needed to create a collaborative culture to achieve a public agency's strategic goals suggests that leaders must develop mutual trust, engage with all employees, and make informed decisions. The research findings align with the intra-organizational collaboration dimensions (Fanousse et al., 2021): collaborative relationship, collaborative leadership, trust formation, joint decision-making, and communication and sharing information. Trust formation ranked first, with 71% of the respondents identifying it as the most important. Collaborative

relationships and joint decision making ranked second. Participants also identified collaborative leadership, communication, and sharing information as critical criteria. Based on the data collected, the intra-organizational collaborative dimensions (Fanousse et al., 2021) align with the employees' perceptions of the critical leadership characteristics for creating a collaborative culture.

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APPENDIX A

SURVEY RECRUITMENT EMAILS

Introductory Email - Survey

Subject: Voluntary Participation in Doctoral Research Study

Shortly, you will receive an email from Kimberly Kerr inviting you to participate in her doctoral dissertation research. The email will come from kerr24@email.franklin.edu.

Ms. Kerr is working on her doctorate in business administration at Franklin University. She is gathering data for her dissertation, which focuses on how collaborative culture can assist with achieving an organization's strategic goals and allocating personnel.

Ms. Kerr is also a consultant providing risk management services to Yuba Water Agency. While we support Ms. Kerr and have allowed her to recruit study participants from Yuba Water Agency, this research is not part of her contract with us. Yuba Water Agency is not funding the research and will not receive any identifiable information or other raw data. Yuba Water Agency will receive only a copy of the final study report.

In her email, Ms. Kerr will provide additional information and contact details should you have any questions or wish to participate.

Thank you,

Human Resources Department
Yuba Water Agency

Survey Invitation Email–First Survey

Subject: Voluntary Participation in Doctoral Research - Survey

Hello,

My name is Kim Kerr, and I am conducting research to finish my doctoral degree at Franklin University in Columbus, Ohio. My study focuses on collaboration and how leaders can create a collaborative culture and efficiently allocate employees to different activities. I invite you to participate in my research because your opinions and thoughts about collaborative culture will assist my research.

Voluntary participation in this study consists of a completely anonymous, written survey that will take about 10 minutes to complete. The survey covers topics such as how you collaborate and what makes a collaborative culture. I am not collecting any personal information or IP addresses that can identify you.

As the Human Resources email noted, I am also a consultant providing risk management services to Yuba Water Agency. Please know that this research is not part of my contract, and Yuba Water is not funding my research. As a courtesy to me, Yuba Water Agency is allowing me to recruit participants so I can answer my research question. They are in no other way involved in this study and will receive only a copy of the final study report.

If you have any questions about my study before deciding whether or not you want to participate, please contact me at kerr24@email.franklin.edu.

If you are interested in participating in my research, please click on the following link to review informed consent information and to complete the survey: [Survey](#).

Thank you for your time and consideration!

Kim Kerr

kerr24@email.franklin.edu

4411 Organ Mesa Loop
Las Cruces, NM 88011

Survey Invitation Email – Interview

Subject: Voluntary Participation in Doctoral Research – Interview

Hello,

My name is Kim Kerr, and I am conducting research to finish my doctoral degree at Franklin University in Columbus, Ohio. My study focuses on collaboration and how leaders can create a collaborative culture and efficiently allocate employees to different activities.

If you recall, I sent an anonymous survey XX weeks ago. After reviewing the survey, I invite you to participate further in my research by providing your opinions and thoughts about creating a collaborative culture and allocating personnel efficiently.

As a follow-up to the survey I collected earlier, I am interested in conducting interviews with managers about creating a collaborative culture and learning your perspective on collaboration.

The confidential, one-on-one interview will take approximately 60 minutes via Zoom at a time convenient for you. Your participation in the interview will not be shared with Yuba Water Agency. The information you provide will be anonymized to protect your privacy.

As a reminder, I am a consultant providing risk management services to Yuba Water Agency. However, this research is not part of my contract and is not funded by Yuba Water Agency. As a courtesy to me, Yuba Water Agency is allowing me to recruit participants so I can answer my research question. They are in no other way involved in this study and will receive only a copy of the final study report.

If you have any questions about my study or the interview before deciding whether or not you want to participate, please contact me at kerr24@email.franklin.edu.

If you are interested in participating in the interview portion of my research, please click on the following link to review the informed consent information and provide your contact details so we can schedule the interview: [Contact Information and Informed Consent](#).

Thank you for your time and consideration!

Kim Kerr

kerr24@email.franklin.edu

4411 Organ Mesa Loop
Las Cruces, NM 88011

Survey Invitation Email – Second Survey (Ranking)

Subject: Voluntary Participation in Doctoral Research - Survey

Hello,

As you may recall, I previously emailed that I am conducting research to finish my doctoral degree at Franklin University in Columbus, Ohio. My study focuses on collaboration and how leaders can create a collaborative culture and efficiently allocate employees to different activities.

After reviewing the information from the survey and conducting interviews, I have identified characteristics that may assist with creating a collaborative culture and efficiently allocating personnel to activities and projects. I invite you to participate in my research by providing your input on ranking these characteristics from 1 to 10, with 1 being the most important.

Voluntary participation in this study consists of a completely anonymous survey ranking 10 items that will take about 5 minutes to complete. I am not collecting any personal information or IP addresses that can identify you.

As you may recall, I am also a consultant providing risk management services to Yuba Water Agency. Please know that this research is not part of my contract, and Yuba Water is not funding my research. As a courtesy to me, Yuba Water Agency is allowing me to recruit participants so I can answer my research question. They are in no other way involved in this study and will receive only a copy of the final study report.

If you have any questions about my study before deciding whether or not you want to participate, please contact me at kerr24@email.franklin.edu.

If you are interested in participating in my research, please click on the following link to review informed consent information and to complete the survey: [Survey Link](#)

Thank you for your time and consideration!

Kim Kerr

kerr24@email.franklin.edu

4411 Organ Mesa Loop
Las Cruces, NM 88011

APPENDIX B

QUALITATIVE STRAND SURVEY INSTRUMENT QUESTIONS

Building and Maintaining Collaboration

The researcher is interested in your ideas about creating and maintaining collaborations within your organization to assist with allocating personnel.

Below are some definitions that may help to help clarify the terms.

Collaboration is when two or more people work as a team using their skills to create a shared understanding to achieve a shared goal.

Cooperation is when two or more people work together to achieve results.

Coordination is when individuals or organizations work separately to achieve a goal together.

Qualitative Survey Questions

1. What are your thoughts regarding how employees coordinate, cooperate, and collaborate?
2. Share your experience/s with collaborations between departments and teams. (Consider the question from the context of your role, such as manager or front-line worker.)
3. Explain how collaboration works in your department.
4. Why do you think some collaborations work while others do not?
5. What fosters/limits collaboration in the organization?
6. What fosters/limits collaboration at a team and/or department level?
7. How would you engage other business units in your project or daily operations?
8. Explain how the organization allocates employees to projects and daily operations.
9. Describe what successful collaboration looks like between teams and/or departments.
10. How does the organization facilitate information sharing?
11. How does the organization facilitate decision-making?
12. How does the organization facilitate resource allocation?

13. What emotions do you experience regarding collaboration in the organization?
14. How do the organization and department set the vision?
15. How do the organization and department align efforts to accomplish the goals?
16. Based on your answers, in general, what do you think is essential to have in place to encourage collaboration?
17. Is there anything else we should know about collaboration and allocating personnel in the organization?

Demographics

1. Indicate if you are management or non-management and your business unit in YWA.
 - a. Management
 - b. Non-management
2. Indicate how long you have worked at YWA.
 - a. Less than a year
 - b. One year to four years
 - c. Five years to nine years
 - d. Ten years to nineteen years
 - e. More than twenty years
3. Please select your business unit.
 - a. Power Systems
 - b. Water Resources
 - c. Internal functions (e.g., IT, accounting)
 - d. Other: _____

Thank you for your participation. Your input is appreciated and valued.

APPENDIX C

INTERVIEW PROTOCOL AND STRUCTURED INTERVIEW QUESTIONS

Building and Maintaining Collaborations

Time of Interview	
Date	
Interview Site	
Interviewer	
Participant	
Position	

[Interviewer: turns on recording device]

[Introduction from Interviewer]

Explanation of Study Design

Hello. My name is Kim Kerr. I'm a doctorate student from Franklin University in Columbus, Ohio. I'm here to learn about the critical leadership characteristics from the employees' perspective of creating a collaborative culture while aligning initiatives to the strategic plan and allocating personnel resources in the organization. Thank you for taking the time to share your thoughts and feedback with me today. This interview aims to learn how you collaborate and allocate personnel resources and what you perceive are the critical leadership characteristics to create a collaborative culture. Please understand that there are no right or wrong answers because these are your experiences. The data collected from you and other participants will be used in a research study to understand and examine general themes of the critical leadership characteristics from the employees' perspective of creating a collaborative culture while aligning initiatives to the strategic plan and allocating personnel resources in the organization. Your rights and privacy will be protected, and confidentiality ensured as you will receive final approval for the release of data. Please note that the interview expectations will take up to 60 minutes.

{Action} Acknowledge their consent with a verbal agreement.

1. When do you think collaboration in the organization is not desirable? Is there a time and place when it is not a good way to go? Is there a time and place when it is a good way to go?
Prompts: Consider different projects/conditions/circumstances where collaboration/s may be more or less desirable.
2. Tell me about any unintended or surprising consequences or harmful effects of collaborations between departments or teams that you have experienced. Why do you think these things happened?
3. Describe what successful collaboration looks like in the organization.
Prompts: Consider processes such as communication patterns and leadership styles.
4. How would you know that collaboration was successful?

Prompts: What difference does a successful collaboration make? What positive outcomes have you seen? Consider project delivery or daily operations improvements. Were there changes in work quality, better retention or recruitment of staff, or improved project delivery?

5. How do you set the vision for your department or team?
6. How do you align your department's or team's activities with the organization's strategic goals?
7. How do you share information with other teams or departments?
8. What collaborative structures or processes does your team, department, or organization use?
9. Given what you have told me, what do you think is **essential** to have in place to create a collaborative culture in the organization?
10. Given what you have told me, what do you think is essential to allocating personnel effectively in the organization?

Other

1. Is there anything else you want to share about collaboration and allocating personnel in the organization?

The researcher may want to follow up with you by phone or email. The researcher may need to check the interpretation of the data or collect more information from you related to this study.

Do you agree to allow the researcher to contact you again later for such purposes?

Yes Thank you.

No Thank you. The researcher will not contact you again.

If yes, enter your name and contact information (email or phone number) for follow-up at a later date if required.

Name: _____

Contact: _____

[Interviewer]

Thank you for your time and cooperation in this interview. Please be assured that our discussion today will remain confidential. If you have any questions or concerns about what we discussed today, my contact information is kerr24@email.franklin.edu or (209) 256-5077.

APPENDIX D

CONSENT FORMS

Consent Form – First Survey

My name is Kimberly (Kim) Kerr and I am a graduate student in the Doctor of Business Administration program at Franklin University in Columbus, Ohio. As part of the requirements for earning my degree, I am doing a research project and am inviting you to participate.

I am also a consultant providing risk management services to Yuba Water Agency. This research is not part of my contract and Yuba Water Agency is not funding the research. They will not receive any identifiable information or other raw data. Yuba Water Agency will receive only a copy of the final study report.

Before deciding whether to participate in the study, you should read this form and ask questions if there is anything you do not understand.

PURPOSE: The study aims to identify the critical leadership characteristics needed to create a collaborative culture from employees' perspectives. The findings may help Yuba Water Agency to build a stronger collaborative culture and allocate personnel resources within the organization.

WHAT YOU WILL DO IN THE STUDY: If you decide to take part in this study, you will be asked to complete an anonymous survey. Most of the survey questions require a written response asking you to share your thoughts on collaboration within your organization. The survey should take about twenty (20) minutes to complete.

DECISION TO TAKE PART IN THE STUDY: Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss of benefits you would normally have.

RISKS AND BENEFITS: I believe there is little risk to you for participating in this study. If you become stressed or uncomfortable, you may skip a question. You can also stop taking the survey or you can withdraw from the project altogether.

CONFIDENTIALITY AND PRIVACY: I will not ask you for any personal information, such as your name or address. Please do not include any personal information in your survey responses. I will not collect your email or IP address; the survey is completely anonymous. Only my Franklin University dissertation chair and I will have access to the information. Other agencies that have legal permission have the right to review research records. The Franklin University IRB has the right to review research records for this study.

QUESTIONS: If you have questions about this research, please contact Kimberly A. Kerr, Principal Investigator, at (209) 256-5077 or kerr24@email.franklin.edu. You may also contact the faculty member supervising this work, Dr. Sherry Abernathy, at sherry.abernathy@franklin.edu. If you have any questions regarding your rights as a research

participant, please contact the Franklin University IRB Office at 614-947-6037 or irb@franklin.edu.

TO ACCESS THE SURVEY: Please click the button below to proceed and participate in this study. If you do not wish to participate, please close out your browser window.

Consent Form – Interview

Consent to Participate in a Research Study

My name is Kimberly (Kim) Kerr and I am a graduate student in the Doctor of Business Administration program at Franklin University in Columbus, Ohio. As part of the requirements for earning my degree, I am doing a research project. I am inviting you to participate in the interview portion of my study since you serve in a managerial role at Yuba Water Agency.

I am also a consultant providing risk management services to Yuba Water Agency. This research is not part of my contract and Yuba Water Agency is not funding the research. They will not receive any identifiable information or other raw data. Yuba Water Agency will receive only a copy of the final study report.

Before deciding whether to participate in the study, you should read this form and ask questions if there is anything you do not understand.

PURPOSE: The study aims to identify the critical leadership characteristics needed to create a collaborative culture from employees' perspectives. The findings may help Yuba Water Agency to build a stronger collaborative culture and allocate personnel resources within the organization.

WHAT YOU WILL DO IN THE STUDY: If you decide to take part in this study, you will be asked to participate in a confidential, one-on-one interview via Zoom at a time that is convenient for you. During the interview, you will be asked to provide more detailed information regarding your ideas about creating a collaborative culture.

With your permission, I will record the interview so I can focus on our conversation and later transcribe the interview. The interview should take about 60 minutes to complete.

DECISION TO TAKE PART IN THE STUDY: Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss of benefits you would normally have.

RISKS AND BENEFITS: I believe there is little risk to you for participating in this study. If you become stressed or uncomfortable, you may skip a question or take a break. You can also stop the interview or withdraw from the project altogether.

CONFIDENTIALITY AND PRIVACY: I will keep all study data from the recorded interviews in a separate password-protected file accessible only by me. All recordings and transcripts will be anonymized by using a participant number that will not list the participant's name, position, or any identifiable information. The cross-referenced list with name and participant number will be stored in a separate password file. Only my Franklin University dissertation chair and I will have access to the information. Other agencies that have legal permission have the right to review research records. The Franklin University IRB has the right to review research records for this study.

After I write a copy of the interviews, I will erase or destroy the recordings. When I report the results of my research project, I will not use your name. I will not use any other personal identifying information that can identify you. I will use pseudonyms (fake names) and report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.

QUESTIONS: If you have questions about this research, please contact Kimberly A. Kerr, Principal Investigator, at (209) 256-5077 or kerr24@email.franklin.edu. You may also contact the faculty member supervising this work, Dr. Sherry Abernathy, at sherry.abernathy@franklin.edu. If you have any questions regarding your rights as a research participant, please contact the Franklin University IRB Office at 614-947-6037 or irb@franklin.edu.

Consent Form – Final Survey (Ranking)

My name is Kimberly (Kim) Kerr and I am a graduate student in the Doctor of Business Administration program at Franklin University in Columbus, Ohio. As part of the requirements for earning my degree, I am doing a research project and am inviting you to participate.

I am also a consultant providing risk management services to Yuba Water Agency. This research is not part of my contract and Yuba Water Agency is not funding the research. They will not receive any identifiable information or other raw data. Yuba Water Agency will receive only a copy of the final study report.

Before deciding whether to participate in the study, you should read this form and ask questions if there is anything you do not understand.

PURPOSE: The study aims to identify the critical leadership characteristics needed to create a collaborative culture from employees' perspectives. The findings may help Yuba Water Agency to build a stronger collaborative culture and allocate personnel resources within the organization.

WHAT YOU WILL DO IN THE STUDY: If you decide to take part in this study, you will be asked to complete an anonymous survey. Specifically, you will be asked to rank the leadership characteristics critical for creating a collaborative culture to assist with allocating resources in the organization. The survey should take no more than five (5) minutes to complete.

DECISION TO TAKE PART IN THE STUDY: Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss of benefits you would normally have.

RISKS AND BENEFITS: I believe there is little risk to you for participating in this study. You can stop taking the survey or you can withdraw from the project altogether.

CONFIDENTIALITY AND PRIVACY: I will not ask you for any personal information, such as your name or address. I will not collect your email or IP address; the survey is completely anonymous. Only my Franklin University dissertation chair and I will have access to the information. Other agencies that have legal permission have the right to review research records. The Franklin University IRB has the right to review research records for this study.

QUESTIONS: If you have questions about this research, please contact Kimberly A. Kerr, Principal Investigator, at (209) 256-5077 or kerr24@email.franklin.edu. You may also contact the faculty member supervising this work, Dr. Sherry Abernathy, at sherry.abernathy@franklin.edu. If you have any questions regarding your rights as a research participant, please contact the Franklin University IRB Office at 614-947-6037 or irb@franklin.edu.

TO ACCESS THE SURVEY: Please click the button below to proceed and participate in this study. If you do not wish to participate, please close out your browser window.

APPENDIX E

QUANTITATIVE STRAND SURVEY INSTRUMENT QUESTIONS

Ranking Criteria

1. Key criteria identified in Qualitative Strand
 - a. Rank the criteria from most important to least important
 - b. Rank themes, if appropriate
 - c. Provide a text box for participants to explain their ratings.
2. Is there anything else we should know about collaboration and allocating personnel in the organization?

Demographics

1. Indicate if you are management or non-management and your business unit.
 - a. Management
 - b. Non-management
2. Indicate how long you have worked at the organization.
 - a. Less than a year
 - b. One year to four years
 - c. Five years to nine years
 - d. Ten years to nineteen years
 - e. More than twenty years
3. Please select your business unit.
 - a. Power Systems
 - b. Water Resources
 - c. Internal functions (e.g., IT, accounting)
 - d. Other: _____

APPENDIX F
QUANTITATIVE STRAND RESULTS

Management Employees' Ranking

	Trust	Coaching/ Training	Decision- making	Respect	Engagement	Collaboration	Culture	Relationships	Vision	Environment
Management										
Power Systems										
<i>Between 5 to 9 years</i>										
Respondent 28	4	8	1	9	2	6	10	7	5	3
<i>Between 10 to 19 years</i>										
Respondent 10	6	1	2	4	5	9	8	7	10	3
Resource Planning										
<i>Between 1 to 4 years</i>										
Respondent 27	1	6	3	10	7	5	9	2	4	8
Internal Functions										
<i>Less than 1 year</i>										
Respondent 15	1	2	7	8	4	9	10	3	5	6
Respondent 25	2	4	9	10	1	5	8	6	7	3
<i>Between 5 to 9 years</i>										
Respondent 8	1	9	3	10	2	7	6	4	5	8
Respondent 9	1	3	4	5	2	6	7	8	9	10
Respondent 19	1	4	6	7	3	10	8	2	9	5
Respondent 21	1	9	2	3	7	4	5	6	10	8
Respondent 26	1	5	4	9	8	10	2	6	3	7
Respondent 31	1	10	9	8	6	7	5	2	3	4

Non-Management Employees' Ranking

	Trust	Coaching/ Training	Decision- making	Respect	Engagement	Collaboration	Culture	Relationships	Vision	Environment
Non-management										
Water Resources										
<i>Between 1 to 4 years</i>										
Respondent 30	1	2	4	3	5	8	7	9	10	6
<i>Between 5 to 9 years</i>										
Respondent 20	1	8	2	4	3	5	6	7	9	10
Power Systems										
<i>Between 1 to 4 years</i>										
Respondent 5	1	3	4	10	2	6	7	8	9	5
<i>Between 5 to 9 years</i>										
Respondent 4	2	4	5	1	3	7	9	10	6	8
Respondent 6	4	9	3	2	5	6	1	10	8	7
<i>Between 10 to 19 years</i>										
Respondent 7	1	2	3	7	8	4	9	5	6	10
Internal Functions										
<i>Less than 1 year</i>										
Respondent 2	1	4	3	8	5	2	9	6	10	7
<i>Between 1 to 4 years</i>										
Respondent 1	5	4	7	9	1	2	10	3	8	6
Respondent 11	1	3	2	4	6	7	9	8	10	5
Respondent 12	1	7	2	3	4	5	6	8	9	10
Respondent 18	2	9	6	7	10	4	5	8	3	1
Respondent 23	1	8	5	6	3	7	9	4	10	2
<i>Between 5 to 9 years</i>										
Respondent 13	1	3	7	4	2	6	5	8	10	9