Exploring Factors That Contribute to a Culture of Learning and Leadership Development in Local Health Departments

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DISSERTATION

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DEDICATION

This dissertation is dedicated to my two children, Marco and Maya, who will always be my inspiration. And to my husband, Juarez, whose invaluable and constant support, patience, and encouragement has motivated me along this journey.
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ABBREVIATIONS

ASTHO  Association of State and Territorial Health Officials
CHA    Community Health Assessment
CHIP   Community Health Improvement Plan
DrPH   Doctor of Public Health
LHD    Local Health Department
NACCHO National Association of City and County Health Officials
NNPHI  National Network of Public Health Institutes
PH WINS Public Health Workforce Interests and Needs Survey
PHAB   Public Health Accreditation Board
PHD    Public Health Division
PHTC   Public Health Training Center
QI     Quality Improvement
SPH    School of Public Health
SUMMARY

The public health workforce is a critical component of the public health infrastructure (Lichtveld & Cioffi, 2003). In an environment where the public health needs of the community are complex and constantly changing, the public health workforce may benefit from leadership competency development. However, workforce development that includes leadership development has been a complex problem for public health agencies for many years (Beck & Boulton, 2012). Factors involved in nurturing an organizational culture and environment within local health departments (LHDs) where leadership competency development is prioritized and sustained may be critical to supporting an LHD’s workforce development efforts.

The implementation of a culture of learning that has resulted in building and sustaining effective leadership skill development for the workforce may not be typical of LHDs. Historically, LHDs have focused on discipline-specific competency-based training in LHDs that does not foster the development of leadership competencies – specifically change management, systems thinking, and strategic communication – that contribute to the adaptive leadership of the LHD workforce that enables them to tackle complex public health challenges. The group dynamic and organizational structural factors identified as critical to defining a culture of learning may play a key role in supporting and promoting leadership development that results in a well-skilled workforce.

The dissertation research that will be conducted is a sequential multi-phased study that will utilize a mixed-methods approach. A mixed methods approach has been selected due to the complex nature of the culture of learning (group dynamic and organizational cultural) elements that will be examined. The first phase of this research will study the leadership development
training support that LHDs receive externally from regional Public Health Training Centers (PHTCs). This first phase is also intended to establish a baseline for the LHDs that will be further investigated in this dissertation research. The second phase of the study will study the group dynamic and organizational cultural factors that may be active in LHDs. The third and final phase of the study will be a case study of accredited LHDs that will illuminate understanding as to how these factors contribute to leadership development for the LHD workforce.
I. BACKGROUND AND PROBLEM STATEMENT

Study Objectives

The purpose of this dissertation research is to examine how a culture of learning may facilitate leadership development for the local public health workforce. The workforce is an essential component of the public health infrastructure that is confronted with a continuously fluctuating and challenging public health landscape. Current and upcoming complex challenges surrounding the public’s health require the expertise of public health professionals that are equipped with leadership skills (Gebbie & Turnock, 2006; Lachance & Oxendine, 2015). Continuous leadership skill development may enable the public health workforce to embrace a more holistic and comprehensive approach to problem-solving; continuous leadership development would arm the workforce with the skills and knowledge which would empower it to effectively address the challenges that arise.

Principally, this dissertation research aims to determine the extent to which factors that define a culture of learning, are active in accredited local health departments. According to Senge (1990) and Harvard Business Review (2013), a culture of learning is defined as a collection of values and practices within an organization that fosters the exploration of thought and new ideas in a safe and supportive environment. There may be various factors evident within an organization that, when integrated, work to nurture and promote a culture of learning. Specifically, this study aims to describe both the organizational structural and group dynamic factors involved in promoting or inhibiting a culture of learning.

A secondary aim of this dissertation research is to determine the ways in which these factors ultimately contribute to leadership competency development for the local health department workforce. An organizational culture that integrates the organizational structural and group dynamic factors that will be subsequently described, and thereby nurtures learning, may enable public health professionals to
engage in knowledge-sharing that will not only increase workforce capacity, but create and possibly sustain leadership development practices as well (Kreitner et al., 2003; Kaufman et al., 2014).

Thirdly, this dissertation research aims to identify the external trainings and training elements that have been most supportive in fostering a culture of learning that promotes leadership development for the local health department workforce. As part of the Public Health Accreditation Board’s requirements, local health departments (LHDs) must develop a workforce development plan that addresses gaps in capacity and capabilities and includes strategies to address such gaps (PHAB, 2013). These health departments must also provide documentation that they provide leadership development opportunities for their workforce, as well as evidence of a supportive work environment (PHAB, 2013). Furthermore, as LHDs work to obtain reaccreditation, they must demonstrate how they have implemented their workforce development plan as well as how they are moving toward increasing the capacity of their workforce.

The following study objectives will be addressed in this dissertation research:

1. Identify the evidence of organizational structural and group dynamic factors that define a culture of learning in accredited local health departments;
2. Determine the extent to which a culture of learning promotes, or is associated with, leadership development;
3. Identify opportunities for local public health departments to foster strategies that promote leadership skill development of the workforce.

Leadership development for the public health workforce has been highlighted as a critical gap in the literature (Yeatman & Nove, 2000; Kreitner et al., 2003; Saleh et al., 2004; Lachance & Oxendine, 2015). Increased leadership skills, supported by cultures of learning, may enhance a local public health’s department ability to effectuate effective public health action (Kreitner et al., 2003; Saleh et al.,
The factors involved in developing and implementing a culture of learning deserve closer inspection as to the impact they have on the leadership development of the local public health department workforce.

**Background**

Prior to delving into the details of this problem, it is important to understand the current state of the public health workforce, as well as understand the importance of leadership development and the role it may play for the workforce. This will be followed by a description of how learning is manifested within the organizational culture. Also, it is important to understand the basis of public health accreditation for local health departments – as more of them move towards obtaining this status – and how the accreditation requirements for workforce development may incorporate factors that define a culture of learning. Finally, a narrative of the current state at a local public health department will follow to illustrate one example of the workforce development issues and challenges facing LHDs today.

**The Public Health Workforce**

The public health workforce is a critical – if not the most important – component of the public health infrastructure (Lichtveld & Cioffi, 2003). Since one of the aspects of responsibility of the public health workforce is delivery of essential public health services, strengthening it will strengthen the infrastructure (Lichtveld & Cioffi, 2003).

NACCHO’s 2013 National Profile of Local Health Departments illustrates the workforce development challenges that LHDs across the nation are experiencing. According to the report, of the 1,922 LHDs that responded to the Profile survey (out of a total of 2,532 LHDs in the U.S.), 88% of the nation’s LHDs employ fewer than 100 full-time equivalent (FTE) of staff. Additionally, the median
number of staff and FTEs has decreased in LHDs serving populations of 25,000 or more between 2010-2013 (NACCHO, 2013). The attrition of full-time public health staff over time may be concerning, given the complex health problems that are evident in most communities and the potential need for a highly trained and robust LHD workforce with the capacity to address these problems. To further exacerbate the workforce development issues, the report found that more LHD top executives are facing retirement age, with 25% at age 60 or older, compared with 16% in this age group in 2005 (NACCHO, 2013). The report also highlights the significant percentage of staff in LHDs without advanced degrees. Forty percent of all LHDs responding to the Profile survey have agency executives with only an associate’s or bachelor’s degree, and only 22% of LHDs have executives that have earned a degree in public health (NACCHO, 2013). If the current and future public health workforce is not adequately supported to further their learning and obtain leadership skills to address the health needs of the populations they serve, the public health infrastructure may face additional challenges.

In their assessment of the public health workforce and the challenges it faces, Gebbie and Turnock (2006) state that “long-term workforce development” is needed to sustain highly efficient and productive public health workers and improved health outcomes in the communities they serve. They continue by stating that this is a challenge that public health agencies face - while production and retention of public health workers remain important issues, so too now is the area of assessing the workforce and its needs. In order build and enhance workforce capacity – defined as the process of improving the workforce’s ability to meet its objectives and perform better (Beaglehole & Dal Poz, 2003), workforce training and development may need to be primary considerations in the organizational culture of public health agencies.

Additionally, Gebbie & Turnock (2006) recommend public health managers actively work with employees around professional development needs to help “build skills for career advancement.” This need for additional skills was echoed by findings from a survey conducted by the researcher in 2014 at a small, urban local public health department. This survey found that the workforce expressed a strong
desire for the provision of professional and leadership development opportunities; despite the fact that there were individuals with no desire to obtain an advanced professional degree or promote within the LHD, they expressed a strong yearning for ongoing skill development that would enable them to critically think about current public health challenges and be involved in creating innovative solutions (Bustamante, unpublished). To ensure that local health jurisdictions stay on the cutting edge with services and programs, and to ensure staff can effectuate those programs and services at the highest level, these “skills for career advancement” may include leadership competencies. Discipline-specific training may enhance the skills and abilities of public health workers to deliver essential services, but broad-based leadership development strategies and activities – such as knowledge sharing mechanisms and working in teams – may contribute to, and further strengthen, the development of leadership competencies in public health workers.

Workforce development that includes leadership development has been a complex problem for public health agencies for many years (Beck & Boulton, 2012). A nationwide web-based Public Health Workforce Interests and Needs Survey (PH WINS) conducted in the Fall of 2014 by the Association of State & Territorial Health Officials (ASTHO) and the de Beaumont Foundation further underscored that state and LHD staff were lacking in particular leadership competencies. The survey identified the top six (in no particular order) needed leadership competencies as:

- Communicating persuasively
- Systems thinking integration
- Change management
- Working with diverse populations
- Problem solving of complex issues
- Interpretation of data
Of these six competencies, communication, systems thinking, and change management have been consistently recognized as critical leadership competency areas that are lacking amongst public health and medical health professionals (Wright et al, 2000; Kreitner et al, 2003; Saleh et al, 2004; & Callender et al, 2006). Increasing training and knowledge in these leadership competencies has been found to augment workforce capacity as they contribute to an employee’s ability to cope with and lead changes in public health practice, and utilize various information-sharing mediums to inform and educate their professional peers (Kreitner et al, 2003; Saleh et al, 2004).

Research has revealed that leadership competencies development may play a key role in not only building workforce capacity, but enhancing the capacity of an organization as a whole (Yeatman & Nove, 2000; Kreitner et al, 2003) by ensuring that health agencies have staff in the right jobs with the necessary skills (Kaufman et al, 2014). As public health employees are supported to develop their leadership skills and abilities, they may be better able to support the public health agency as a whole – as well as partners and stakeholders – in communicating, building partnerships and leading change to address complex public health issues. This cycle of agency support and employee enhancement through leadership development can be fostered by an organizational culture within the LHD that promotes learning.

**Organizational Culture**

Organizational culture is defined as a pattern of shared basic assumptions learned by a group as it solves problems (Schein, 2010). It encompasses the accumulated learning of beliefs and values that ultimately become the foundation for the organization’s operating norms (Schein, 2010). In essence, organizational culture can explain the “why things are done” in addition to the “what things are done,” and could be as Schein (2010) describes, a stabilizing force. Additionally, according to Watkins (2013), organizational culture shifts incrementally in response to internal and external forces and influences.
Because of its fluid nature, it has the ability to develop gradually, which – as Watkins (2013) argues – opens the possibility that culture change can be managed as a continuous process. As subsequently described, there are forces and influences in the form of factors that can shape an organizational culture into one that prioritizes learning. Thus, it is possible for an LHD, as an organization, to gradually adopt a culture that values and promotes learning for the public health workforce. For such a culture to be considered, it is important to understand the factors involved in defining a culture of learning.

Cultures of Learning within Organizations

In The Fifth Discipline, Senge (1990) states that organizations learn only through individuals who learn. With a more complex, more fast-paced and vastly different future on the horizon, learning becomes a necessary tool for the workforce in order for organizations to adapt and flex to the novel challenges they may encounter (Senge et al, 2008). Marsick and Watkins (2010) agree that continuous learning at the individual level is necessary but not sufficient to influence change in knowledge and performance; learning must be embedded in the systems, practices, and structures of organizations for intentional improvement in knowledge and performance to occur. Thus learning must evolve from the individual level to the organizational level for a shift in culture to occur and become sustainable. How does this evolution occur? For the learning to progress to the organizational level, the culture - as defined by Grossman (2015) - needs to consist of a community of workers with a “growth mindset,” where the workforce not only possesses a desire to learn and apply knowledge because everyone is capable of learning, but also a willingness to share their knowledge with others. This community of workers presents a “critical mass” that essentially “tips the scales” significantly enough to highlight the importance of learning and embracing learning opportunities.

There is further evidence in the business and human resource literature that identifies the following emergent factors as critical in defining a learning culture for an organization: fostering
inquiry, encouraging reflection, a commitment to learning to learn (e.g. having a vision inclusive of learning), and enabling knowledge sharing (Bersin & Associates, 2010; Egan et al, 2004; Schein, 2010). These factors are very similar – if not the same as – the following factors identified by Yang (2003) and Marsick & Watkins (2010):

- Fostering inquiry and dialogue
- Reflection
- Empowerment toward a collective vision
- Encouraging work in teams

Senge (1990) affirms that for an organization to truly foster learning throughout an organization – and thereby fostering a workforce learning community – the involvement of all individuals within its workforce is required; thus, evidence of these factors can be found within the group dynamics of an organization.

Additionally, there are organizational structural factors acknowledged by Yang (2003) and Marsick & Watkins (2010) that provide supplementary evidence of whether or not a culture of learning is present in an organization. These factors include, but are not limited to, the following:

- Supervisor support
- Processes for knowledge sharing
- Connecting the organization to its environment

Integration of these factors into organizational culture and structure may positively impact the leadership development of the organization’s workforce. Both the group dynamic and organizational cultural factors identified above will be subsequently explained in this research. Creating a culture that nurtures learning is a systems-level approach that may positively impact the leadership development of the workforce and thereby contribute to the LHD’s workforce capacity. Efforts to enhance an LHD’s
workforce capacity are currently addressed through the voluntary accreditation process for health departments; health departments must demonstrate purposeful action as evidence that they are meeting the standards set forth in this process.

**Public Health Accreditation**

Established in 2007, the Public Health Accreditation Board’s (PHAB) public health department accreditation process is an attempt at advancing quality and performance within public health departments. The Board has developed accreditation standards that define the measures and expectations for all public health departments that seek to become accredited. As stated on the Board’s website, “National public health department accreditation has been developed because of the desire to improve service, value, and accountability to stakeholders” (2013). While public health accreditation is currently a voluntary nationwide initiative, it is rapidly becoming a standard of practice for LHDs, as well as state and tribal health departments.

Public health accreditation for state and local health departments came about as a response to a 2003 Institute of Medicine’s recommendation to improve public health agency performance by examining the benefits of accrediting governmental public health departments (Bender et al, 2007; Beitsch et al, 2014). The alignment of public health standards with performance assessment tools led to a growing interest to define and standardize public health practice (Joly et al, 2007). In 2004, an extensive review of accreditation programs in healthcare, education, social service and public service organizations was conducted (Mays, 2004). Overall, accreditation programs had positive effects on service quality, operations, and service-related outcomes, thus providing support that accreditation can have beneficial effects (Mays, 2004). There have been previous efforts to improve the performance of public health agencies: Joly et al (2007) claim that the National Public Health Performance Standards Program, the Illinois certification program, and Washington’s Performance and Capacity Assessment
Program, have analyzed the relationship between performance improvement, system performance, and in some cases, health outcomes. However, these previous efforts to assess performance have been primarily observational; it became apparent that a program that used metrics to measure specific inputs and outcomes would provide the evidence needed to support accreditation (Mays, 2004).

A blueprint for a national voluntary public health accreditation program was developed in 2006, funded by the Robert Wood Johnson Foundation and the Centers for Disease Control & Prevention (Beitsch et al, 2014). One year later, the Public Health Accreditation Board (PHAB) was created – a nonprofit organization under the support of executives from the American Public Health Association, the Association of State and Territorial Health Officials, and the National Association of City and County Health Officials, among others. PHAB created a series of Standards and Measures using the 10 Essential Services of Public Health as a foundation.

PHAB developed a total of twelve domains that align with the Essential Services of Public Health. While the Essential Services of public health describe the core functions of the public health system, the domains focus on the LHD’s capacity to carry out these functions. Domain #8 addresses workforce development specifically for public health departments, which, as previously mentioned, includes the development of a workforce development plan that addresses gaps in capacity and capabilities and includes strategies to address such gaps. (PHAB, 2013). Under this Domain, Standard 8.2 describes that a competent workforce is ensured “through the assessment of staff competencies, the provision of individual training and professional development, and the provision of a supportive work environment” (PHAB, 2013). The measures that provide evidence that this particular standard is being met include workforce development plans and strategies, participation in personal professional development opportunities, and recruitment and retention activities. This standard also addresses support in the work environment, provision of leadership development opportunities, knowledge transfer, encouragement of systems thinking, and collaborative learning (PHAB, 2013). All of these
elements tie directly to the group dynamic and organizational structural factors that define a culture of learning, thus accreditation may further foster the promotion of a culture that promotes leadership development.

The extent to which a public health agency’s workforce undergoes leadership development may be directly related to whether or not this development is prioritized and/or well supported in an LHD’s workforce development efforts through the accreditation process. The LHD cases that will be investigated intend to elucidate the role that knowledge sharing and other group dynamic factors play in promoting a culture of learning for the public health workforce, as well as identifying the organizational structural elements that contribute to a supportive learning environment. And while accreditation may be an attempt to address the apparent gaps in leadership skill development for the public health workforce in LHDs, the following example is evidence that LHDs are currently struggling with creating an organizational foundation that fosters such development.

**Local Public Health Division Example**

In preparation for this dissertation research, and in order to further understand how workforce development is perceived and implemented (particularly as it relates to whether leadership development opportunities were offered or provided) – the researcher conducted an environmental scan of the workforce at an urban public health department (PHD) with approximately 50 employees.

A previous survey of PHD brought to light issues regarding workforce development and leadership concerns within one job classification – Community Health Workers (CHWs) (Bustamante, unpublished). That study pointed to substantive differences in how senior management and the CHWs view development opportunities. Specifically, for the CHWs, “although most agreed there were trainings available to enhance their professional growth [within their specialized discipline], the majority did not agree that their supervisors were committed to quality work and customer service, that
their supervisor finds opportunities for them to advance professionally, nor that PHD was committed to their growth as an employee” (Bustamante et al., unpublished). Senior management, however, was less uniform in their perceptions; all believed they provide good support for staff interested in trainings. Per one member of management, however, PHD does not have a good system for training front-line staff and investment in trainings has not translated into new skill application. Another manager strongly disagreed that PHD is committed to the career growth of the staff and yet another commented that career development and professional growth are not a priority given the lack of staff and high intensity of work (Bustamante et al., unpublished). These perceptions are in line with the findings in the PH WINS (2014) relating to the organizational structural factor of supervisor support. While these perceptions could be related to a lack of effective communication, which is certainly one aspect of leadership, they highlight the importance and role of supervisor support in an actual LHD. The connection between supervisor support and leadership development opportunities needs to be further explored; the support from an employees’ supervisor may encourage leadership skill development in an employee that is paramount to addressing and strengthening his/her optimal performance, cohesive programmatic collaborations and uninterrupted quality public health service to the community (Harper et al, 2015).

Certainly intriguing are the factors that support leadership development of the public health workforce. Preliminary key informant interviews conducted in 2015 at PHD focused on exploring motivation behind learning. The results of these interviews imply that knowledge-sharing strategies, such as the informal staff-intern coaching and mentoring relationship, fosters leadership development for both parties, and aids in contributing to an organizational environment that promotes learning and skill development, as well as reflection practices. These interviews also revealed that leadership development is not routinely integrated into staff-supervisor check-in meetings and discussions, despite interest from staff (Bustamante et al, unpublished). These results may encourage PHD to strengthen and/or expand the informal coaching and mentoring practice with existing staff as well as new
employees. In addition, several individuals were interviewed with the goal of obtaining their perspectives on what implementing a learning culture would look like in PHD, and how any current program opportunities may be connected to training opportunities. One workforce development subject matter expert acknowledged that it is important for all staff to know what they need in order to grow (Bustamante, unpublished). Creating an organizational culture and environment within the department where people want to be engaged in learning may help to prioritize and enhance the leadership development of the department’s workforce.

To summarize, PHD’s challenges may be typical of many local health departments struggling to develop and sustain a culture of learning that fosters leadership development of its workforce. The aforementioned preliminary interviews cited instances where certain group dynamic and organizational structural factors either promoted or inhibited learning or leadership development for the workforce. For instance, the PHD staff that were interviewed cited a lack of supervisor support and a lack of commitment from (and communication challenges with) senior management. The survey of PHD staff also revealed an interest in engaging in knowledge sharing practices and fostering inquiry and dialogue between different levels of staff, including a willingness from senior management to foster such learning and development. These factors need to be examined further so that local health departments can begin to understand how to foster leadership development that may contribute to maximizing the capacity of their workforce.

**Problem Statement and Research Questions**

Both the business and human resource sectors have been successful in implementing cultures of learning that have resulted in building and sustaining effective leadership skill development for their respective workforce (Puccio et al, 2007; Bersin & Associates, 2010; Grima et al, 2014), but the implementation of such a culture may not be typical of LHDs. A focus on discipline-specific competency-based training in LHDs has resulted in a “siloed” technical training culture (Kaufman et
al, 2014) that has led to “siloed” technical functionality within LHDs. This culture does not fully foster the development of adaptive leadership competencies – specifically change management, systems thinking, and strategic communication – that contribute to the adaptive leadership of the LHD workforce that enables them to tackle complex public health challenges. The group dynamic and organizational structural factors identified as critical to defining a culture of learning may play a key role in supporting and promoting leadership development that results in a well-skilled workforce; therefore, the presence of these factors, and the role they play in LHDs, need to be better understood. Ultimately, a public health workforce with a high level of leadership skills may enhance the organization’s ability to execute effective public health action.

The dissertation research will be designed to answer the following research questions:

1) How can group dynamic and organizational structural factors support a culture of learning in local health departments?
   a) What group dynamic factors are active in accredited local health departments?
   b) In what ways do group dynamic factors promote or inhibit a culture of learning for the local health department workforce?
   c) What organizational structural factors are active in accredited local health departments?
   d) In what ways do organizational structural factors promote or inhibit a culture of learning for the local health department workforce?

2) How does a culture of learning enhance elements of leadership development – specifically systems thinking, change management, and strategic communication – in accredited local health departments?

3) What external trainings and training elements have been most supportive in fostering a culture of learning that promotes leadership development for local health departments?
Leadership Implications and Relevance

There are several implications of this research that have the potential to influence and inform the LHD workforce. Firstly, the integration of a culture of learning in an LHD, and the value that is subsequently placed on learning, may sow the seeds for leadership development within the LHD workforce – it may nurture innovation, critical thinking and systems thinking, which are all essential elements of leadership development (Saleh et al, 2004; Lachance & Oxendine, 2015). Secondly, an LHD that cultivates a culture of learning within the organization may also foster adaptive leadership skills in employees that allow for higher level thinking to address complex public health challenges, which could lead to a more adaptive organization. Lastly, nurturing a culture of learning may simultaneously enable the LHD to cultivate the leadership potential of its workforce.

Value of a Culture of Learning

Integrating a culture of learning in LHDs may provide a foundation for the continuous learning and leadership development of the public health workforce. This is important because, as a critical component of the public health infrastructure, the workforce is currently facing limited learning opportunities – both within the LHD and external to it – amidst an increasingly challenging public health landscape. The Institute of Medicine’s landmark report, *The Future of the Public's Health in the 21st Century* (2003), called for a strengthening of the public health infrastructure – which includes increased learning opportunities – as well as for increased organizational work on accreditation, with the intent of addressing training and competency of the public health workforce at the state, local, and tribal levels (Bigley, 2016). The Health Resources and Services Administration (HRSA) established the Public Health Training Centers (PHTCs) in part to respond to quality standards and measures being established by the budding accreditation movement. The PHTCs are a network of training centers that encompass specific LHDs within their respective region, and aim to enhance the capacity of the public health workforce by facilitating a community of practice. PHTCs provide “specialized training in public
health to expand and enhance training opportunities. These opportunities focus on technical, scientific, managerial, and leadership competencies of the current and future public health workforce” (Health Resources and Services Administration, 2016). Since 1999, the PHTC program has focused on adapting their training opportunities to the ever-changing needs of the public health workforce, and subsequently may be contributing to national efforts to build and inform a culture of learning for the LHDs it serves.

A culture of learning is important because it has the potential of creating an organization that fosters creative thinking and idea development in employees, which enables employees to address the challenges in the public health arena. While these complex challenges often include public health workforce training around topical areas such as the emergency preparedness threats of anthrax in 2001 and Ebola in 2014, such complex adaptive public health challenges will always involve elements of key partnerships and collaborations, communication, and the consideration of various players in the public health system. When the workforce is encouraged to learn and innovate, it enhances its capacity and also places value on the learning itself. Lichtveld et al (2001) argue that gaps in workforce development can be attributed to a lack of prioritization on learning within an LHD, thus an LHD that upholds a continuous learning approach may benefit by improving its workforce capacity (Kreitner et al, 2003; Kaufman et al, 2014). In essence, an organization that places value on the learning and development of its workforce may reap the benefits of a workforce that is educated, motivated, and working at its maximum potential.

The value that is placed on learning may also contribute greater value to the purpose of the LHD. According to Joneson (2015), purpose is the glue that connects human attributes to drive growth within organizations. The purpose of a local health department is found in its mission, but it is also found within each individual department employee. It contributes to their reason for doing what they do and staying where they are. However, if individual purpose is connected to the organizational purpose, then the organization may be able to increase employee retention, develop strong partnerships (social capital), and nurture long-term growth as it further encourages employees to continue learning. As a
result of this case study research, the local health departments may be encouraged to revisit their organizational purpose and values to determine whether they are driving growth via the promotion of a learning environment that emphasizes leadership development. An organizational commitment to the leadership development of its workforce may contribute to an enhanced public health organization focused on continuous learning with increased organizational capacity to serve its constituents.

**Elements of Leadership**

Currently, the learning and professional development of public health staff may not be immediately and apparently prioritized due to the competing administrative challenges and priorities an LHD faces in this current political and economic climate, coupled with the limited fiscal resources and the need to “do more with less.” Heifetz (2009) discusses characteristics that enable organizations to be more flexible and adaptive. One characteristic includes developing leadership capacity, and another characteristic includes institutionalizing reflection and continuous learning. These qualities may be further enhanced for an organization that establishes and maintains a culture of learning; Heifetz (2009) states “being open to learning is a critical capacity for anyone seeking to enable their organization to adapt.” The willingness and ability to acknowledge that one doesn’t have all the answers is part of being open to learning. Consequently, learning is not about becoming a subject matter expert, but rather about building upon the skills and fostering the strengths of the members of the workforce. Developing each public health worker’s unique and varied strengths is not only essential both for each worker’s professional development, but for their development as a leader as well. When an organization has made the investment in encouraging its workforce to learn and further develop their strengths, then it enables the organization to draw upon the knowledge, expertise, and leadership abilities of its workforce. Having a workforce that consists of knowledgeable leaders allows the organization to become more flexible and adaptive to the administrative, political, and economical challenges it will face in the future.
According to Ye et al (2015), senior-level executives in LHDs are in a position to help their staff develop their personal career goals and to identify training needs. The authors affirm, “good leadership creates a supportive work climate, inspires and motivates employees and facilitates implementation of programs and activities” (2015). Having organizational support for learning, which enables staff to pursue career goals in addition to leadership development, may positively impact productivity and the capacity of the workforce to deliver high quality services to the community (Callender et al, 2006). Furthermore, the relationships between staff and supervisors may improve; as the health department prioritizes leadership development and learning for its workforce, it inadvertently places higher value on its employees as budding public health leaders. Additionally, for LHDs to remain at the forefront of evidence-based best practices aimed at improving the health of the communities they serve, it becomes important for them to invest in instilling a culture that promotes ongoing learning in the leadership development arena for its workforce (Lachance & Oxendine, 2015). The PHAB accreditation standards have clearly identified leadership development as part of the workforce development requirements. As LHDs undergo the accreditation process and begin to address leadership development elements intended to enhance the capacity of their workforce, they may also be building their organizational capacity. An adaptive organization with a workforce that demonstrates leadership competency proficiency, maximizes the performance of its workforce and may be subsequently better able to address complex public health challenges.
II. CONCEPTUAL AND ANALYTICAL FRAMEWORK

Literature Review

A 1988 Institute of Medicine report – *The Future of Public Health* - notes the importance and need for workforce development in the public health workforce. Subsequent Institute of Medicine reports published in 2003 (*Who Will Keep the Public Healthy? Educating Public Health Professionals in 21st Century*, and *The Future of the Public’s Health*) validate the importance of and the need for further research on workforce issues in the public health arena. For the purposes of this dissertation research, workforce development encompasses the broad training and educational opportunities that may enhance an individual’s professional skills and abilities. According to Cioffi et al (2004), investments in workforce development assume that workforce capacity is linked with the effectiveness and efficiency of providing essential public health services, which can ultimately benefit both an LHD and the communities it serves. Leadership development is also included under this umbrella of workforce development, as it pertains to the development of higher level skills and abilities that enable the public health workforce to address complex problems and challenges. With potential benefits to the LHD in the area of maximizing workforce capacity, it is worth exploring the factors associated with cultivating a learning culture that may help to foster leadership development. Leadership development is an area that is severely lacking in the public health workforce (Yeatman & Nove, 2000; Saleh et al, 2004), and can have a significant positive impact on the LHD’s ability to address the various complex and adaptive challenges facing them today.

The literature compiled in preparation for this dissertation research touches on several critical components of the conceptual framework underpinning this research. First, the various phases of learning will be described in relation to Bloom’s Taxonomy of Learning – as it is a well-known paradigm demonstrating the evolution of learning – and as it is illustrated in Figure 1. Bloom’s Taxonomy of Learning. Next, an examination of the theory supporting cultures of learning will
illustrate how learning can be facilitated and supported within organizations. This examination will also include an in-depth exploration of the significance of the group dynamic and organizational structural factors that define a culture of learning. Following this examination, the literature review will delve into the foundation for public health accreditation, to understand it as an attempt to move toward establishing an organizational culture that supports the leadership development of the public health workforce. Finally, leadership development for the LHD workforce – for the purposes of this dissertation research – will be defined in relation to the group dynamic and organizational structural factors that will be further explored.

**Phases of Learning**

In further examining the learning that occurs within organizations, there is evidence that this learning occurs in several stages or processes. Organizations that have established a strong learning culture are adept at creating, acquiring and transferring knowledge, as well as at modifying behavior to reflect new knowledge and insight (Huber, 1991; Garvin, 1993). Bloom’s Taxonomy (Figure 1), a well-established framework created in more than sixty years ago to promote higher forms of thinking, illustrates that learning progresses from basic obtainment of information up to a higher level of critical thinking and creation of new ideas. Skerlavaj et al (2007) express this evolution of learning in terms of three phases: the acquisition of information, interpretation of information, and transformation of information into action.

Skerlavaj et al (2007) argue that information gathering is a key attribute of a culture of learning. The authors argue that information is essentially raw material for learning; it needs to be further digested by individuals in order for it to have meaning, or lead to any meaningful actions or decisions. These actions and decisions are therefore dependent upon the quantity and quality of the information that is shared. The second phase – interpretation of information – is where these actions and decisions
begin to be formulated. This phase is critical because it is where information is analyzed and understood. The understanding of information occurs formally or informally, either through face-to-face interactions or written communication; it also involves processes that would need to be in place at the organizational level to facilitate interpretation of information (Skerlavaj et al, 2007). Such processes may include opportunities where colleagues can discuss viewpoints or situations where knowledge can be applied. Skerlavaj et al (2007) describe that in the third and final phase, after information is made available and understood, behavioral change emerges. Each individual employee - armed with new knowledge - perceives things from a unique perspective or gains deeper insight into a particular function or process. These perceptions and insights ultimately evolve into a cognitive understanding that increases capacity, and is the basis for individual behavior. According to the authors, the learning process is completed when behavioral change at the individual level occurs (2007).

Behavioral change at the individual level can occur through the practice of certain behaviors or disciplines. Senge (1990) highlights a series of disciplines which, when practiced together, can result in the organization’s ability to address issues and problems with a systems thinking perspective. Ultimately, the organization is learning when the workforce as a whole is practicing the following principles:

- Personal mastery – the continuous process of personal development
- Mental models – reflecting upon how we make sense of the world and how we take action
- Shared vision – an authentic and personal vision which guides the learning process and inspires commitment
- Team learning – the process of aligning and developing the capacity of a team to create the results its members truly desire
The practice of these principles not only become important factors in defining an organization with a well-established culture of learning, but also enables an organization to produce a workforce that is more connected to others, more committed to their work, and possesses a deeper sense of responsibility in their work (Senge, 1990; Garvin, 1993).

The phases of learning that Skerlavaj et al (2007) present in their model can serve to illustrate how learning evolves in an organization. According to this model, information is obtained during the first phase. For example, perhaps an LHD sponsors a workshop on communication best practices with external community organizations. For learning on this specific topic to begin to occur, LHD staff need to receive this information by attending the workshop. The information shared must then be interpreted within a specific context in order for it to have value and meaning for the employees – to continue with the workshop example, perhaps the employees may begin to make analogous connections between the information shared, and their own experience interacting with community partner stakeholders, or they may apply the information during a future encounter with an actual community partner. This second phase is similar to the “comprehension” and “application” stages in Bloom’s model. Finally, in order for learning to be effective, both behavioral and cognitive changes in individuals are needed (Murray & Donegan, 2003), which occurs in the third stage of learning, according to Skerlavaj et al’s model. Using the workshop example once more, the LHD staff would begin to exhibit behavioral and cognitive change as a result of this new knowledge learned because they would be applying new tactics or strategies that enable them to approach or interact with community partners in a novel way. In essence, in order to shift the perspective or approach externally, the shift must first occur internally. Thus it is important not to undermine the significance that learning must first occur at the individual level.

Additionally, Schein (2010) affirms that “a learning culture must contain the shared assumption that solutions to problems derive from a deep belief in inquiry and a pragmatic search for ‘truth.’” In the third learning phase – in which information is transformed into action – behavioral and cognitive
changes are the ultimate result of learning; these changes are expressed through the actions of individuals, as well as through their perceptions of their environment (Skerlavaj et al., 2007).

Organizations with a strong learning culture may promote behavioral and cognitive change that results in empowered employees that are able to adapt to changes in both their internal and external organizational environments. And if LHDs – as organizations – foster learning through the integration and implementation of the various group dynamic and organizational structural level factors that will be subsequently described, then the public health workforce may benefit from learning leadership skills that will further their leadership development.

![Bloom’s Taxonomy](image)

Figure 1. Bloom’s Taxonomy of Learning, revised (Longman, 2001)

**Organizational Culture of Learning**

Fiol & Lyles (1985) define a culture of learning as “the process of improving actions through better knowledge and understanding.” The Association of Talent Development – a global training and professional development organization – defines a learning culture as:

“A learning culture is a community of workers continuously and collectively seeking improvement through new knowledge, new skills, and new applications of knowledge and skills to
achieve the goals of the organization. A learning culture is a culture of inquiry; an environment in which employees feel safe asking tough questions about the purpose and quality of what they are doing for customers, themselves, and other stakeholders. The pursuit of learning is woven into the fabric of organizational life (2016).”

Cultures of learning involve a multifaceted process that refers to the development of new knowledge and has the potential to change workforce behavior (Huber, 1991; Slater & Narver, 1995) – specifically, individual and organizational behavior (Murray & Donegan, 2003). This change in behavior comes about with the implementation of various factors, and the practice of disciplines that help promote learning. In The Fifth Discipline, Senge (1990) describes several disciplines which contribute to creating a culture of learning within an organization. One such discipline, personal mastery for example, is defined as the continuous personal development and learning that encompasses the continuous clarification of what is important to the individual, as well as taking an authentic look at the current situation and identifying difficulties or challenges not previously noted (Senge, 1990). The practice of this discipline, which emphasizes the importance of learning at the individual level, is a behavioral practice which helps to move the needle of the organizational environment to one that promotes learning because it indicates that continuous learning is valued as individuals among the workforce engage in this practice. Personal mastery is not something the individuals will be able to participate in immediately, but rather embrace over time. In fact, Lichtveld et al (2001) and Cioffi et al (2004) highlight the importance of lifelong learning for the development of the public health workforce.

Yang et al (2004) and Marsick & Watkins (2010) present a theoretical framework – as illustrated in Figure 2 – of a culture of learning that identifies several key factors divided between two levels: people level and structural level. The “people level” factors involve interpersonal elements that occur within a group dynamic; these factors drive the learning. The “structural level” factors describe how the larger organizational structure may support the learning. Additionally, these factors align with
the various learning disciplines outlined by Senge, as subsequently described.

*Group Dynamic Factors in Learning*

When individuals increase their capacity to learn, they have the ability to influence the organization’s overall capacity to learn, as long as the organization is receptive to their efforts to practice their learning and puts in place mechanisms that enable, support, and reward the use of what is learned (Marsick & Watkins, 2010). The literature has identified several factors that align with the “people level” factors described by Yang et al (2004) in Figure 2.

*Group Dynamic Factor: Teamwork*

Marsick & Watkins (1996) state that “individuals learn first as individuals, but as they join together in organizational change, they learn as clusters, teams, networks, and increasingly larger units.” Teamwork – or as Yang et al (2004) describe as “collaboration and team learning” in Figure 2 – is an important factor that fosters learning. Senge states “team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations” (1990).

According to Senge (1990), there are three critical dimensions to team learning. The first one is the need to think insightfully about complex issues. This happens when teams are able to thoughtfully consider alternative perspectives and points of view – by dialoguing and collaborating with both internal and external partners – in order to create novel solutions (Senge, 1990). For example, local public health professionals work closely with community leaders, urban planners, and government officials when attempting to identify strategies to make walking and cycling safer, more convenient, and more pleasant (Pucher & Dijkstra, 2003). While they possess a different lens through which they approach their primary objectives, the insight each of these groups brings to the table is required for
effective consideration of travel behavior and best practices aimed at preventing traffic accidents and pedestrian/cyclist injury (Pucher & Dijkstra, 2003). Secondly, team work that is complementary to each other’s actions results in innovative, coordinated action – akin to how championship sports teams perform (Senge, 1990). In other words, team members function smoothly when they are aware of, and can complement, one another’s strengths. Thirdly, team members also participate in other teams within the organization. It is important for team members to continue to instill learning practices throughout all teams they participate in – further, one team may engage in a skill or practice that may benefit other teams within the organization (Senge, 1990; Yeatman & Nove, 2000; Callender et al, 2006). For example, the literature describes public health participants in regional leadership institutes that developed collaborative partnerships; as these partnerships evolved into community networks, information resources increased (Umble et al, 2005; Levy et al, 2015). This ultimately contributed to the capacity of the public health community. In essence, by participating in various small teams, public health professionals can share knowledge and information across teams and begin to build a collective knowledge-base.

Additionally, Senge & Sterman (1992) state that in order for the aforementioned three critical dimensions of team learning to exist, team members need to see each other as colleagues and thus be comfortable with having open and honest dialogue. Seeing one another as peers may facilitate openness in dialogue and encourage individuals to share ideas and appreciate a myriad of perspectives (Senge & Sterman, 1992). Skerlavaj et al (2007) also assert that for these team interactions to reach their full potential, there has to be a willingness and openness for discussion. Unless individuals are actively collaborating, sharing and questioning one another’s assumptions, then they cannot operate in a manner that progressively evolves the collective thoughts, beliefs, and actions of a group or organization as a whole. Since “teams are microcosms of the larger organization” (Senge, 1990), when teams are learning, so too is the organization.
Yang (2003), Yang et al (2004) and Marsick & Watkins (2010) also identify the promotion of inquiry and dialogue as being a factor that facilitates learning at the group level. Inquiry and dialogue is demonstrated through instances during which people gain reasoning skills to express their views and the capacity to listen and question others’ views (Marsick & Watkins, 2010). This factor is related to with Senge’s second discipline of mental models: he describes that often new ideas are not practiced or acted upon “because they conflict with deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting” (1990). These internal images are the mental models that not only help one make sense of the world, but also dictate how one takes action.

In a study of armed forces teams, Lim & Klein (2006) revealed a direct relationship between mental models and team performance: when team members were able to adopt similar mental models after undergoing a process of inquiry and dialogue, they arrived at a shared understanding of a situation which ultimately enabled them to follow through on the collective action required. This example demonstrates that when mental models are questioned and reshaped by considering other viewpoints, then the team may begin to function as a collective unit. Further, the exploration of differing viewpoints that occurs during the process of inquiry and dialogue encourages creativity in thinking and promotes learning (Yang, 2003). Additionally, the ability to dialogue also introduces support for individuals to express what they don’t know, thereby allowing them the latitude to be incorrect. However, if individuals fail to question and challenge their mental models, then they are limited in what they see, and limited in the innovation that they can create, which can subsequently impede learning.

As Marsick & Watkins (2010) state, the presence of inquiry and dialogue in an organization is evidenced by an environment that supports questioning, feedback, and experimentation; the organization needs to acknowledge that it cannot cultivate the learning of its workforce if it does not
systematize ways to convene its staff to exercise innovative thinking and develop new mental models to address the novel situations with which it is faced.

*Group Dynamic Factor: Empowerment toward a collective vision*

Empowerment toward a collective vision is an additional factor that is critical in promoting a culture of learning in organizations (Yang et al, 2004; Marsick & Watkins, 2010); this factor is illustrated when “people are involved in setting, owning, and implementing a joint vision” (Yang et al, 2004). Senge (1990) describes this joint vision as an internal force that may be inspired by an idea, and drives individuals toward what they want to create in the organization. Because it is a vision that is created collectively by team members, individuals share a personal responsibility, commitment, and excitement to work towards achieving it. Essentially, shared vision “provides the focus and energy for learning” (Senge, 1990); if a vision is not shared, it is not inspiring to a group. The vision encourages and motivates individuals to experiment with and identify the steps and guideposts needed to pursue this vision (Callender et al, 2006), thereby engaging in a learning process.

Marsick & Watkins (2010) also claim that the empowerment of people toward a collective vision is also demonstrated through a shared responsibility in making decisions – it is a demonstration of commitment to the work. Being involved in making decisions about the organization’s mission and objectives engages people in learning about the organization’s systems while empowering people to develop leadership skills. In this way people are “motivated to learn toward what they are accountable to do” (Marsick & Watkins, 2010). Lachance & Oxendine claim that building a common goal or vision is an essential skill that may empower public health professionals (2015). A collective vision establishes the overarching goal and acts as a rudder to keep the learning process on course and also allows the purpose to be more concrete (Senge, 1990). Establishing a shared vision is also the first step in allowing people to work together because it creates a common identity (Lachance & Oxendine, 2015).
Reflection is another factor that, while not explicitly included in Figure 2 below, nonetheless may significantly impact the behavioral change that occurs as a result of transforming knowledge into action as learning occurs in an LHD organization. Senge (1990) claims that organizations often do not create infrastructures that help their employees integrate learning and working; in today’s global and fast-paced environment, making time for people to dialogue and reflect is often not prioritized. Consequently, the true understanding and the pursuit of deeper meanings of various parts of a system are at risk of potentially not being grasped by an organization’s workforce; in fact, reflection in action within an LHD has not been described in the literature. Senge (1990) claims that the potential decline in critical thinking that may ensue as a result of a lack of opportunities for reflection, could be counteracted by proactively implementing time for people to reflect and “build real shared understanding and commitment.” Senge (1990) further affirms that reflection enables individuals to bring hidden assumptions to the surface to see how they influence behavior, and then challenging those assumptions by balancing inquiry and advocacy: “Here is my view and here is how I arrived at it. How does it sound to you?” Practicing inquiry and advocacy means being willing to expose limitations in thinking and a willingness to be wrong (Senge, 1990; Senge & Sterman, 1992).

While a willingness to be wrong can expose vulnerability, doubt, and hesitation, it can encourage mutual understanding in a way that prompts others within a group to openly consider perspectives they would not typically consider. According to Densten & Gray (2001), the capacity to reflect relates directly to how effectively individuals learn from their personal experiences; reflection provides a meaningful way for leaders to gain a genuine understanding. Reflection can also be a pathway – for the public health workforce – toward considering how complex public health challenges can be addressed with the LHD’s mission and vision in mind.
Each of the group dynamic factors ("people level" factors) described above integrate disciplines outlined by Senge that promote openness and challenge individuals to share experiences and knowledge, which ultimately leads to learning. As Yang (2003) states, “although people initiate change on their own as a result of their learning, organizations must create facilitative structures to support and capture learning in order to move toward their missions.” The factors described above contribute to such facilitative structures at a group dynamic level. Individuals learn first as individuals, but as they join together in groups and clusters and increasingly larger units (Marsick & Watkins, 1996), the learning is shared throughout the organization. As learning becomes widespread, it reaches a level where it may begin to influence the behavioral and cognitive development of each member of the organizational workforce. The group dynamic factors described previously drive the learning, and also help to steer the organization toward the organizational structural factors that support the learning. The literature identifies several organizational structural factors that further enable the learning to become an established component of the organization’s culture.

Organizational Structural Level Factors of Learning

According to Marsick & Watkins (2010), continuous learning at the individual level is necessary, but not sufficient, to influence perceived changes in knowledge. The authors continue by stating “it is not enough to hold individuals accountable for learning continuously without also building the organization’s capacity to support, encourage, and make use of that learning… change must occur at every level of learning – from individual to group to organizational to environmental.” For the learning to truly impact the organization as a whole, the behavioral and cognitive changes that individuals undergo as they transform the learning into action may be impacted by factors that are related to the organizational structure. These factors are represented in Yang et al’s (2004) theoretical framework in Figure 2, under the “structural level” heading. Organizational learning may not be sustainable without structural elements that are in place that nurture and promote learning at every level.
Strategic leadership for learning “shows the extent to which leaders think strategically about how to use learning to create change and to move the organization in new directions or new markets” (Yang et al, 2004). For this to occur, organizational leaders need to demonstrate commitment and support (Yang et al, 2004). This factor is noted in Yang et al’s model in Figure 2 as the “provision of strategic leadership for learning” (2004). Yeatman & Nove (2000) found that a critical component in building the capacity of the workforce is a supervisor’s ability to motivate and support staff, while also being able to identify their professional development – and leadership development – needs. Public health supervisors may also be in a position to model their motivation and support for the ongoing learning of staff, and thereby positively influence LHD staff at all levels – including the executive level.

The PH WINS underscored the critical support role that supervisors may play in the leadership development of the public health workforce. As part of the results of this survey, Harper et al (2015) found, that when employees were asked about their supervisor’s support in having them participate in opportunities that demonstrate their leadership skills and promote their leadership development, employees with the lowest levels of job satisfaction had the highest levels of disagreement in their responses. Yet supervisory support – including elements of respect and relationship – is not a new factor critical to the leadership training of the workforce. In a separate study, the results of a survey of a large local health department illustrate that support for leadership training content is critical, and organizational support – including supervisory support - may affect how well an employee learns and performs (Mayer, 2003). It seems apparent that supervisors – managerial staff who supervise other staff – because of their positional influence in the organization and their relationships with staff – play a pivotal role in providing the initial foundational support and encouragement for creating an environment and culture that fosters learning that may impact overall organizational support for this need – including allowing their staff to fail, as this promotes learning from the errors that were
committed (Callender et al, 2006). Since not all supervisors are positioned at the highest executive level of an LHD, their support can be infused at all levels of an LHD hierarchy. If the organization and/or supervisors within the organization are championing a culture of learning for the entire organization, they may be involved in identifying the leadership needs of their employees and thereby be promoting leadership skill development for their workforce. Employees who are empowered to develop leadership competencies may enhance the organization’s workforce capacity and further strengthen supervisor and organizational support for training and learning, thereby creating a positive feedback loop.

Organizational Structural Level Factor: Knowledge-sharing systems

In the Harvard Business Review, Garvin (1993) states “ideas carry maximum impact when they are shared broadly rather than held in a few hands.” Another factor identified by Yang et al (2004) and Marsick & Watkins (2010) is the creation of systems or processes to capture and share learning. This is defined as access to, and maintenance of, both high and low technology systems that are utilized to share knowledge, and are integrated into the work of an organization. Such systems can include participation of the LHD workforce in seminars at an academic institution, webinars, etc. According to Mahayosnand (1999), mentoring may be one such system or mechanism that can address the deficiency of leadership skill development. Mahayosnand (1999) continues by stating that a mentoring relationship is critical because mentors often provide needed professional support, and they can also reap the benefit of using the relationship as an opportunity to sharpen their own professional skills. Thus, mentoring can be a strategy that encompasses a shared learning relationship similar to that of a near-peer mentor model. In such a model, the mentors are peers to the mentee – Anderson et al (2015) claim that learning by being mentored, while simultaneously acquiring abilities to mentor and teach, is an effective model for promoting career advancement and the support associated with acquisition of professional behaviors.
Another potential knowledge-sharing system or strategy can include access to the regional Public Health Training Center network. Within this network, “each training center contributes expertise in particular skills-based training topics and subject areas. Together they make up the nation’s most comprehensive source of public health training and support” (National Network of Public Health Institutes, 2016). There are other systems or strategies that have been established to promote knowledge-sharing; in fact, some hospital organizations have created learning opportunities by implementing quarterly retreats or “lunch and learn” series as ways to both maximize time and generate shared learning goals and experiences (Callender et al, 2006). This dissertation research aims to explore those knowledge-sharing systems that LHDs have established for their public health workforce.

Organizational Structural Level Factor: Connecting the organization to its environment

The final factor highlighted by Marsick & Watkins (2010), and depicted in Yang et al’s model of a learning organization, is the connection of the organization to its environment. Marsick & Watkins (2010) define this as when people are helped to see the effect of their work on the entire organization – in other words, connecting the work of the team to the overall vision and/or mission of the organization. As part of the extensive PH WINS study, Ye et al (2015) revealed that public health senior management must “ensure that staff have a consistent understanding of organizational goals and strategies and are well-equipped with the skills needed to contribute to their LHD’s mission.” At the crux of this understanding is the clear and consistent communication that needs to occur between public health senior managers/executives and more frontline public health workers in order for this connection to be made (Marsick & Watkins, 2010).

Additionally, because LHDs serve local communities, the connection to its environment is also further defined by the partnerships and linkages that the LHD shares with external community agencies and organizations (Umble et al, 2005). This dimension highlights both the importance of relationships,
and the process of how these relationships relate to one another in contributing to the work of the LHD – a concept that Senge (1990) stresses should be evident as organizations embrace the discipline of systems thinking.

Yang et al’s (2004) learning culture framework identifies several “people level” – or group dynamic – factors that, when practiced, can influence the “structural level” (organizational structural) factors in an organization. While learning begins at the individual level, it connects up to a group level throughout the workforce as the learning is nurtured and becomes more integrated within the workforce. At this group level, various factors are demonstrated, which not only serve to drive the learning in an organization, but are also in and of themselves, features of leadership development. Teamwork, inquiry and dialogue, collaboration, and collective visioning are all leadership characteristics that lead to further development of leadership competencies – which encompass not only skills and abilities, but behaviors as well (Yang et al, 2004; Saleh et al, 2004). These group dynamic factors subsequently influence the organization at the structural level. This is where learning becomes explicitly integrated into, and supported in, the organization. The organizational structural factors help to sustain the learning that is occurring, and thus may sustain the learning of leadership competencies. Further, these factors consequently provide evidence of leadership knowledge gained, as well as enhanced workforce capacity, as the ultimate result.
Public Health Accreditation & Leadership Development

Public health accreditation is aimed at advancing the quality and performance of governmental public health departments. While several standards and measures have been developed to attempt to measure quality and performance, Standard 8.2 under Domain 8: Workforce Development (PHAB, 2013) directly relates to how departments provide training and professional development for their workforce. Leadership development is one aspect of professional development, and as discussed previously, is crucial for maximizing the capacity of an LHD. Furthermore, learning is crucial for leadership development to occur (Kaufman et al, 2014).

PHAB Standard 8.2 – which is encompassed under Domain #8: Workforce Development – specifically addresses the competency of the workforce “through the assessment of staff competencies, the provision of individual training and professional development, and the provision of a supportive work environment” (PHAB, 2013). Included within this Standard are measures which relate to an LHD’s ability to provide professional development opportunities – including leadership development – for its workforce. As outlined in PHAB’s Standards & Measures (2013), these opportunities may include, but are not limited to trainings, collaborations, and mentorships. An LHD’s successful
demonstration of meeting this Standard is intended, according to PHAB, to further strengthen health department performance (Beitsch et al, 2014). With the first public health departments receiving accreditation status in 2013, Kronstadt et al (2016) conducted an evaluation study that found that among health departments that had been accredited for one year, more than 90% report improved quality, increased accountability and transparency, and improved management processes. This indicates that accredited LHDs may have been successful in the leadership development of its workforce that has resulted in improved quality and performance. These improvements may be partly attributed to the implementation of factors that may have helped to create a culture that has facilitated leadership development.

Leadership Development & Public Health Workforce Capacity

According to Saleh et al (2004), “developing qualified and able public health leaders is a critical step in building the infrastructure needed to address public health challenges.” As described in the previous chapter, LHDs are providing public health programmatic and discipline-specific training for their workforce (Kaufman et al, 2014), but this training has created a highly specialized workforce that lacks the foundational skills needed in several areas. With recent adaptive challenges in the public health arena that include healthcare changes, an increasing emphasis on partnerships, and greater policy attention on the social determinants of health, there is a demand for a public health workforce that is skilled in critical leadership capacities (Hunter, 2015). As Lachance and Oxendine (2015) claim, the field of public health is increasingly characterized by the need to work in inter-professional teams across disciplines; because of this, leadership skills are needed among the public health workforce to address the interdisciplinary challenges that may arise.

So how is leadership development defined? In the business literature, leadership development is
defined as growing the collective capacity of organizational members to engage effectively in processes that enable groups of people to work together in achieving goals (Day, 2001; Yukl, 2006). This includes building the capabilities of an organization’s members by helping them understand how they relate to others and how to coordinate their efforts so that they are better able and prepared to tackle complex adaptive challenges. (Day, 2001; McCallum & O’Connell, 2008).

This dissertation research will focus on leadership development for the public health workforce as the acquisition of additional competencies in a way that is meant to strengthen their capacity to deliver effective public health services, programs, and actions (Kreitner et al, 2003; Saleh et al, 2004; Lachance & Oxendine, 2015). While skills are defined as specific proficiencies or abilities, competencies include clusters of related abilities and skills, in addition to the behaviors and knowledge that accompany these skills (McCallum & O’Connell, 2008). This dissertation research will focus on three leadership competencies that are repeatedly identified as critical yet most lacking amongst public health professionals – change management, strategic communication, and systems thinking (Wright et al, 2000; Kreitner et al, 2003; & Saleh et al, 2004) – and describe the extent to which these competencies are evident in, and demonstrated by, the LHD workforce. These three leadership competencies have also been identified by Association of State & Territorial Health Officials affiliates and peers as the most important to address with regard to LHD workforce leadership development (Kaufman et al, 2014). The Core Competencies for Public Health Professionals, revisions adopted June 2014, references and describes these competencies under the Communications Skills and Leadership & Systems Thinking Skills domains. Finally, these three leadership competencies are also described in Measure 8.2.3, under PHAB Standard 8.2, as leadership training topics for which the LHD workforce must demonstrate participation in (PHAB, 2013). Increasing training and knowledge in these leadership competencies has been found to augment workforce capacity as they contribute to an employee’s ability to cope with and lead changes in public health practice, and utilize various information-sharing
mediums to inform and educate their professional peers (Kreitner et al, 2003; Saleh et al, 2004). These competencies are further described below.

*Change management*

The National Public Health Leadership Development Network – a consortium of institutes providing a network for leadership development – created the Leadership Competency Framework in light of “concern for the quality and competitiveness of the public health workforce (Wright et al, 2000). One such competency identified in the Framework is change management. In general, change management addresses how an organization does business and how it can improve (Kotter, 2011). The Framework also describes several factors which define effective change management for the public health workforce. Some factors include for example, the development and implementation of evaluation systems in relation to change strategies; the ability to identify, create, and balance critical dynamic tension in relation to change strategies; and the empowerment of others to take action (Wright et al, 2000).

While specific examples of use of effective change management in LHDs are scarce, the *Core Competencies for Public Health Professionals* (2014), reference the ability for supervisory and executive level public health staff to contribute to and/or develop organizational strategic plans that include measurable objectives and targets. This speaks to the development and implementation of evaluation systems in relation to change strategies that is mentioned in the Leadership Competency Framework. The literature also describes the importance of determining the need for change in public management, as well as the need to communicate and facilitate it through a continuing process of exchange with key partners and stakeholders (Fernandez & Rainey, 2006). This need is important and comes into play during the implementation of new programs, a shift in organizational structure or processes, or a change impacting the role of public health in relation to new local policies, and
Fernandez & Rainey concur that such actions are dependent upon management’s ability to disseminate information about the change and communicate the urgency of change to its workforce (2006). Fernandez & Rainey also state that leaders in the public sector possessing solid change management skills are able to listen, learn, and communicate the needs of their organization in ways that build support for change (2006) – thus, empowering others to take action. Change management is also referenced in the PHAB *Standards & Measures* (2013) under Measure 8.2.3 as an example of a course topic for LHD manager leadership training. Change management is also mentioned in Measure 8.2.4 as an example of a policy that contributes to the provision of a healthy workplace environment in the LHD. Change management lays the groundwork for public health professionals seeking to address public health challenges that may present alternate viewpoints and resistance in the advent of change (Fernandez & Rainey, 2006; Kaufman et al, 2014), and thus is an important competency for them to develop.

* Systems thinking

Systems thinking is another critical public health leadership competency identified in the literature (Lichtveld et al, 2001; Umble et al, 2005; Kaufman et al, 2014). According to Leischow et al (2008), improving the public’s health requires the understanding of the complex adaptive systems involved in both causing and solving public health problems. The authors illustrate this concept with the example of pandemic influenza: preventing and containing this disease requires collaboration across various disciplines, including global surveillance, rapid laboratory analysis, and the creation of extensive communications that enable communities to prepare and respond effectively – each component plays a critical role in the larger complex system of structures and functions (Leischow et al, 2008). The literature identifies several key factors that serve as evidence for systems thinking. One component is the practice of sharing knowledge between stakeholders in a collaborative fashion (Leischow et al, 2008; *Core Competencies for Public Health Professionals*, 2014). Collaboration is
important because it builds inter-organizational relationships, services and programs. A second component is to analyze complex systems by modeling their intended and unintended actions and consequences; this analysis is critical to understanding how collaborative opportunities can be capitalized upon, and how collaborations can work toward developing a vision – an essential leadership skill (Wright et al, 2000; Core Competencies for Public Health Professionals, 2014).

A study that evaluated the National Public Health Leadership Institute revealed that collaboration can be taught; the team-based project-focused learning model operationalized at this Institute included seminars and simulations in teamwork, negotiation, communication, and other areas. The Institute enabled participants to improve information-sharing by building their relationships (Umble et al, 2005). These findings are consistent with what has been revealed in the business and academic literature – working in a team increases cohesiveness, mutual cooperation, and identification within the group (Yukl, 2001). Ultimately, collaborations positively contribute to the resources available to community members because they often lead to increased communication, improved trust and stronger relationships (Umble et al, 2005). As Leischow et al (2008) state, the development and implementation of multidisciplinary teams is aimed toward the understanding of complex relationships that can better address public health challenges, and is thus another critical competency to be included in a public health leader’s toolbox.

Strategic communication

The final critical leadership component that will be examined in this dissertation research is strategic communication. Zerfass & Huck (2007) state that strategic communication “shapes meaning, builds trust, creates reputation, and manages symbolic relationships with internal and external stakeholders in order to support organizational growth and secure the freedom to operate.” Strategic communication – as described by Wright et al (2000) – encompasses negotiation between stakeholders,
and guiding or mediating action. In addressing the public health challenges of a community, the public health workforce needs to communicate its role to both internal and external partners as they collaborate to improve the community’s health (Kaufman et al, 2014; Lachance & Oxendine, 2015), and for public health leaders, this communication needs to be effective and strategic in order to convey the appropriate messages to their target audiences. The Core Competencies for Public Health Professionals (2014) confirms this, and also includes the facilitation of communication among groups and organizations. Furthermore, as communication is facilitated, the information conveyed to the LHD’s partners can begin to influence how public health interventions are administered; public health leaders must work toward influencing behavior that ultimately improves health outcomes (Core Competencies for Public Health Professionals (2014). Disappointing or unfavorable results due to unfulfilled or inaccurate promises and predictions undermine leadership credibility and lead to employee perceptions of injustice, misrepresentation, and violations of trust (Folger & Skarlicki, 1999; Tomlinson, Dineen, & Lewicki, 2004). Appropriate communications provide employees with feedback and reinforcement during the change (Peterson & Hicks, 1996), which enables them to make better decisions and prepares them for the advantages and disadvantages of change (Saunders, 1999).

There are few specific examples in the literature highlighting the role of strategic communication as a leadership competency in LHDs. The networking aspect of strategic communication is very closely tied to the collaboration-building skill that is a part of systems thinking because it involves communication with partners and building resourceful connections (Saleh et al, 2004; Umble et al, 2008). In one study, Levy et al (2015) assessed the University of Memphis School of Public Health’s innovative strategy of yearlong mandatory workshops that addressed communication skills, networking, teambuilding and other leadership skill areas for Masters-level public health students. After participating in this program, students not only reported increased leadership skill development, but also acknowledged the significant role that these particular leadership skills play in
addressing public health problems (Levy et al, 2015). Communication also plays a significant role in change management: appropriate communications provide employees with feedback and reinforcement during a change process, which enables them to make better decisions and prepares them for the advantages and disadvantages of change (Gilley et al, 2009). Additionally, communication and networking have been identified as critical skill areas in studies conducted with Army officers, and have also been found to strengthen as a result of experiences that whole groups or teams undergo together (Mumford et al, 2000). Communication skills for leaders and networking are also referenced in Measure 8.2.3 in the PHAB Standards & Measures (2013) as examples of course topics for LHD manager leadership training. Strategic communication as a leadership skill may be critical when workers are faced with the complex challenges that are pervasive in communities served by local health departments – which often require a multidisciplinary approach involving collaborations between local governmental agencies and community organizations.

Evidence of Leadership Competency Development

The literature outlines a handful of efforts aimed at further developing leadership competencies in public health professionals, and provide evidence that such competencies can be learned. In evaluating a leadership program for public health professionals, Saleh et al (2004) report that participation of these professionals in the yearlong Northeast Public Health Leadership Institute improved the skill levels of all participants in various competencies. These competencies included accurate and effective communication to professionals and lay audiences, the building of strong and sustainable relationships with community partners, collaboration and coordination to address public health problems, among others. The evaluation found that “leadership development is an essential element in the nation’s efforts to improve the public health infrastructure,” and also found that when public health professionals are placed in an environment where these skills can be taught and practiced, the results can “foster improved decision making within their organizations” (Saleh et al, 2004). In a
related study, Levy et al (2015) assessed the University of Memphis, School of Public Health’s innovative strategy of yearlong mandatory workshops that addressed communication skills, networking, teambuilding and other leadership skill areas for Masters-level public health students. After participating in this program, students not only reported increased leadership skill development, but also acknowledged the significant role that these particular leadership skills play in addressing public health problems (Levy et al, 2015).

The aforementioned examples of public health leadership programs highlight recurring thematic leadership elements that have been found to complement discipline-specific skills and can increase the workforce capacity of public health professionals. Additionally, they demonstrate that programs with the specific aim of teaching leadership skills have been successful in augmenting the capacity and competency of public health workers. However, the participation of public health professionals in an offsite leadership institute may not promote a knowledge sharing environment once the individuals return to their respective LHD. So how can this leadership learning be duplicated – and made sustainable – in a local public health department setting? For this to occur, the LHD may need to integrate learning into its culture; in fact, a strong culture of learning in organizations is critical in supporting leadership development (Yukl, 2001).

**Conceptual Framework**

The conceptual model shown in Figure 3 illustrates the various components involved in how a culture of learning may drive leadership development in an LHD. This dissertation research will focus on identifying, and exploring the impact of, the group dynamic factors and organizational structural factors that define a culture of learning, in LHDs. Numerous external factors may impact a culture of learning in an organization, including but not limited to, fiscal support for leadership training and development, power and influence from executive-level management or policy makers, and competing
priorities for the LHD (Harper et al, 2015; Pourshaban et al, 2015). One such external factor active
across public health organizations in the U.S. currently are the PHTCs. While there are other factors
external to the LHD that are beyond the scope and capacity of this research, PHTCs provide a base of
external support for LHD learning environments. PHTCs will be examined to 1) understand this aspect
of external support as it relates to LHD operations and workforce development, and 2) to identify a
sampling frame for case study selection. This examination will be used to define a base level of external
support for learning between LHDs for further case study.

As the literature indicates, after information is made available to an individual, and subsequently
understood, behavioral change emerges through the practice of disciplines (Senge, 1990; Skerlavaj et al,
2007). If group dynamic factors and organizational structural factors are active in an organization, then
they may serve as the disciplines that may be practiced by LHD staff members, which can impact what
they learn and how they learn it. This research will focus on examining the extent that group dynamic
factors and organizational structural factors are active within the LHD. Factors that impact the
acquisition of learning and the interpretation of learning – the first two phases as illustrated in the
Skerlavaj model – will not be examined as part of this dissertation research.

Evidence and implementation of such factors may create an environment, and thereby facilitate
the development of leadership skills or competencies – specifically in the areas of change management,
systems thinking, and strategic communication – for the LHD workforce. As outlined in the conceptual
model, leadership development as demonstrated by the LHD workforce may be manifested in various
ways. Firstly, public health professionals trained in change management skills demonstrate benefits in
terms of improved relationships with stakeholders (Umble et al, 2005; Skerlavaj et al, 2007; Kaufman et
organizations with a strong culture of learning state that their managers share information and that they
are empowered to take the necessary steps to adapt to changes in internal and external environments –
this alludes to the significant role that strategic communication processes within the organization can play (Kreitner et al., 2003; Kaufman et al., 2014). Thirdly, various authors have identified the need for the public health workforce to engage in systems thinking in order to address complex public health challenges (Kreitner et al., 2003; Saleh et al., 2004; Lachance & Oxendine, 2015). Evidence of such leadership development includes networking, sharing of information, taking action and making decisions, listening, and working collaboratively in groups (Day, 2001; McCallum & O’Connell, 2009). There may be other activities revealed in the research that may indicate evidence of leadership development occurring among the LHD workforce. These high-level leadership abilities may then further strengthen and sustain the factors that actively contribute to a culture of learning within the LHD, as well as lead to effective public health action by the LHD workforce.
Figure 3. Conceptual Framework
The public health workforce is a core component of the public health infrastructure. Moreover, public health employees in LHDs possess a high level of skill in specific health disciplines, and they are also faced with rapidly evolving complex problems. Because these skills often limit them to function within programmatic silos, and because the need for leadership development in the local public health workforce is clear, a closer investigation of the factors that impact a culture of learning that facilitate leadership development is needed.
III. STUDY DESIGN, DATA, AND METHODS

Research Purpose

The purpose of this dissertation research was to examine how group dynamic and organizational cultural factors contributed to a culture of learning, as well as examine the extent to which a culture of learning may facilitate leadership development for the public health workforce in LHDs. Continuous leadership skill development may arm the workforce with the skills, abilities, and knowledge which would endow it to effectively address adaptive health challenges (Lachance & Oxendine, 2015).

Principally, this research aimed to describe both the organizational structural and group dynamic factors (Senge, 1990; Marsick & Watkins, 2010) involved in promoting or inhibiting a culture of learning. A secondary aim of this dissertation research was to determine whether these factors actively contribute to leadership competency development for the local health department workforce; whereas skills include specific proficiencies and abilities, competencies involve a cluster of related skills and abilities that also encompass associated behavior and knowledge (McCallum & O’Connell, 2008). An organizational culture that integrates these organizational structural and group dynamic factors may enable public health professionals to engage in continuous learning and knowledge-sharing that may increase workforce capacity, and create and foster leadership development practices (Kreitner et al, 2003; Kaufman et al, 2014). Thirdly, this dissertation research aimed to identify the external trainings and training elements have been most supportive in fostering a culture of learning that promotes leadership development for the local health department workforce.

Design Overview

This dissertation research was a sequential multi-phased study that utilized a mixed-methods approach. A mixed methods approach is preferred for the investigation of complex problems in real-world settings where one data source or type may be insufficient; this approach allows the researcher to
adopt a pragmatic perspective that lends itself to examine social phenomena in depth (Feilzer, 2010). Organizational learning culture is a complex and multidimensional area of study involving group dynamic and organizational structural factors that are also complex and interconnected (Huber, 1991; Slater & Narver, 1995). For these reasons, a mixed methods approach permits the researcher to delve further into the details of each of these factors, as well as the various leadership components that define each leadership competency being studied. In essence, a mixed methods methodology allows the researcher to gain a more cohesive understanding of the issues being investigated (Maxwell, 2013), which, for this study, included leadership and cultural components that were both quantified and qualitatively described in order to address the study’s research questions.

The mixed methods approach can also incorporate the strengths of both qualitative and quantitative data collection and analysis techniques (Johnson & Onwuegbuzie, 2004) in order to best answer the research questions of interest. Strengths of quantitative research include the collection and analysis of precise numerical data, as well as its usefulness in studying a large sample (Johnson & Onwuegbuzie, 2004). In this dissertation study, quantitative data collected in both the Phase 1 survey (distributed to all regional PHTCs) and the Phase 2 survey (distributed to all accredited LHDs) enabled the researcher to summarize evidence of factors that contribute to a culture of learning. Strengths of qualitative research include “getting close enough to the people and circumstances there to capture what is happening” (Patton, 2015), as well as having the flexibility to explore the interconnections between different design components (Maxwell, 2013). The document review and the semi-structured interviews were the two main qualitative components of this dissertation study that were guided and informed by the quantitative components; they also enabled the researcher to probe deeper into concepts that are revealed in the earlier phases. The qualitative methods utilized were intended to understand the story and themes in “the richness of context and the fullness of thick description” (Patton, 2015). The combination of both qualitative and quantitative methods allowed for multiple ways of thinking about
and interpreting data; the mixed methods approach incorporated a systems perspective that enabled the researcher to identify the culture of learning factors that may be evident in LHDs, and how they are impacting leadership development for LHD staff. The analyzed data included both quantitative and qualitative findings intended to extend the understanding of the complex learning and leadership development phenomena under investigation in this research.

Because the dissertation research questions focus on which factors associated with a culture of learning are evident in LHDs, how they are being manifested in LHDs, and how the culture may be contributing to leadership development of the LHD workforce, the unit of analysis for this study is the LHD organization. This unit was explored throughout the three phases in this research that align with the conceptual model. The first phase included a survey to all ten regional Public Health Training Centers (PHTCs) across the U.S. The survey explored ways in which PHTCs may foster a culture of learning for LHDs. It also captured data which may inform the extent of external support of leadership development in LHDs, as illustrated in the conceptual model. This phase established a sampling frame for the subsequent second and third phase of this dissertation research. This first phase also began to answer the third research question which asks about the external trainings and training elements that have been most supportive in the culture of learning factors that may promote or inhibit learning. The second phase – similar to the first phase – facilitated the selection of information-rich LHD cases for the third phase. This phase involved a census survey of accredited LHDs, with the goal of gauging the extent to which factors associated with leadership development and culture of learning are evident in LHDs. The quantitative survey applied in this second phase explored the group dynamic and organizational cultural factors (first research questions) that may impact the behavioral change phase of learning (as indicated in the conceptual model), and it also began to investigate the evidence of the leadership competencies of interest for this dissertation research (second research question). The third and last phase involved a descriptive case study investigation of three purposefully selected accredited
LHDs from those that completed the survey from the previous phase. Two LHDs were from a “high-support” PHTC region, and one LHD was from a “moderate-support” PHTC region. The case study investigation involved both a document review and semi-structured interviews that aimed to examine the culture of learning components in greater depth and also explored how the three leadership competencies of focus for this research – systems thinking, strategic communication, and change management – are being demonstrated.

With regard to sampling approach, each phase informed the other, and contributed to a selection of the sample that was investigated further as part of the Phase 3 case study. Additionally, the data collected in this dissertation research was analyzed in a progressive manner as each phase was conducted. In essence, data from each phase was examined and analyzed independently in order to inform aspects of the next phase. Once all the phases were completed, a comprehensive analysis that integrated and validated the findings from all three phases was conducted. The results from the data collected in each of the phases was used to verify and validate data across phases, in order to obtain a comprehensive and enhanced rich picture: findings from both the survey conducted in the first phase and the survey conducted in the second phase helped to inform the questions in the semi-structured interviews in the third phase; findings in the third phase were triangulated to findings from both the second and third phase.

The first two phases for this dissertation research were critical in not only refining the sample of accredited LHDs that were examined more deeply in Phase 3, but also in informing each of the other phases. The sequential nature of this design allowed for the creation of a more data-driven purposeful sampling structure. Additionally, this study incorporated the benefits of both quantitative and qualitative research that provided insight into the research questions that were examined.
Sampling Approach, Data Collection, & Data Analysis

Each of the phases in this dissertation research are steps in the research process, intended to contribute to the overall understanding of the factors and elements that may be contributing to leadership development for the LHD workforce. The methodology and analysis involved in each phase of this research study contributed to a more complete picture of how these factors are impacting the acquisition and practice of leadership competencies.

Phase 1- Sampling Approach

In Phase 1, the researcher approached the National Network of Public Health Institutes (NNPHI), introduced the research, and requested that the web-based mixed methods survey be distributed to all 10 regional PHTCs. The NNPHI sent email addresses of each of the PHTC coordinators to the researcher. The researcher then sent each PHTC coordinator the survey link via email and requested a response to the web-based mixed methods survey (with mostly quantitative and some additional qualitative clarifying questions). This survey was designed to gauge the extent to which the regional PHTCs offer support to LHDs with regard to developing and sustaining a culture of learning and leadership development. In the literature, LHD staff that have participated in leadership training outside of their own LHD organization have indicated that the experience has not only allowed them to be exposed to leadership skills that can be applied toward organizational change, but has also provided them with an opportunity to practice what they have learned, and nurture their commitment to this learning (Yeatman & Nove, 2000, Saleh et al, 2004, Dreisinger et al, 2008). Thus, the survey administered in this phase explored the topic areas covered by trainings offered to LHDs – specifically whether the PHTC offered trainings in the leadership competencies of interest for this dissertation research: systems thinking, change management and strategic communication. Additionally, the survey
inquired about the format of these trainings (web-based versus face-to-face), frequency of the trainings, and the type and level of participation by LHD staff.

**Phase 1- Data Collection**

The web-based survey (Appendix 1) was distributed via email to each regional PHTC coordinator. This survey was aimed at gaining a baseline understanding of the external training support that LHDs affiliated with PHTCs receive; this survey also attempted to elicit an understanding of the type of leadership trainings that LHDs may engage in with their respective PHTCs. PHTCs that indicated a regularly occurring, or sustainable, leadership training framework for LHDs on the survey enabled the researcher to identify the PHTC supported learning opportunities within that region that are provided to LHD staff. Survey questions addressed whether the PHTC has offered trainings to the LHDs in their region within the past five years, how these trainings might be packaged (e.g. one-time sessions vs. progressive series), whether the trainings or learning opportunities they offer focus on any of the leadership competencies of interest for this dissertation research, as well as frequency of trainings and LHD participation rate. There were also some clarifying open-ended qualitative questions that allowed PHTCs to provide more detail about the content of the trainings offered to LHDs. In order to minimize non-responses, a reminder email was sent to all PHTC coordinators one week after the initial distribution date, and the survey remained open for an additional week following the reminder.

**Phase 1- Data Analysis**

An initial scan of the PHTC websites and findings from the literature regarding the importance of leadership competency development (Saleh et al, 2004; Kaufman et al, 2014; Lachance & Oxendine, 2015), and training opportunities and challenges for LHD staff (Lichtveld & Cioffi, 2003; NACCHO, 2013), led to the development of the following classification criteria:
• Evidence of training(s) in systems thinking, strategic communication, and/or change management offered to LHDs within the past five years,
• At least two types of training formats offered per year,
• An average participation rate of at least 10 LHD staff, and
• An indication that LHD staff of various job classifications (e.g. program managers, senior supervisors) participate.

PHTCs that met all of the above criteria were classified as “high-support” PHTCs; PHTCs that met at least two of the above criteria were classified as “moderate-support” PHTCs. The classification of PHTC regions assisted the primary researcher in the LHD case selection for Phase 3. Additionally, data collected from the qualitative responses were transcribed and entered into the qualitative data analysis software program, Atlas Ti 8®. The program was utilized to identify and analyze patterns & themes in the survey. *A priori* data codes were developed, but emergent codes were also developed from the analyses. The findings from the data analyzed in this phase were triangulated with the data from Phase 2 and 3.

**Phase 2 – Sampling Approach**

LHDs that are accredited are required to undergo efforts related to workforce development that also address leadership development; thus, a focus on accredited LHDs may provide evidence of how leadership development is promoted within its workforce, and what factors may be contributing to this promotion. The sampling approach in Phase 2 entailed a census sampling of LHDs that have received accreditation status from PHAB as of January 1, 2017. This assures that all LHDs included in the sample have met the minimum criteria of having a workforce development plan as outlined in PHAB Competency 8, and allows at least a level baseline standard for comparison and inclusion. The primary researcher was unable to contact accreditation coordinators of each LHD through the corresponding
regional PHTC coordinator, but was able to promote the web-based survey via the National Association of City and County Health Officials (NACCHO) Performance Management staff.

As of January 1, 2017, there were a total of 141 accredited LHDs; Table 1 illustrates the distribution of accredited LHDs across each PHTC region. All 141 accredited LHDs will be surveyed in this phase. The list of accredited LHDs will be obtained from the PHAB website (http://www.phaboard.org/news-room/accredited-health-departments/).

<table>
<thead>
<tr>
<th>Region</th>
<th>States Served</th>
<th># Accredited LHDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1 - New England</td>
<td>MA, CT, ME, NH, RI, VT</td>
<td>4</td>
</tr>
<tr>
<td>Region 2</td>
<td>NY, NJ, Puerto Rico, US VI</td>
<td>4</td>
</tr>
<tr>
<td>Region 3- Mid-Atlantic</td>
<td>PA, DE, DC, MD, VA, WV</td>
<td>12</td>
</tr>
<tr>
<td>Region 4</td>
<td>GA, AL, FL, KY, MS, NC, SC, TN</td>
<td>17</td>
</tr>
<tr>
<td>Region 5- Great Lakes</td>
<td>IL, IN, MI, MN, OH, WI</td>
<td>46</td>
</tr>
<tr>
<td>Region 6- South Central</td>
<td>AR, LA, NM, OK, TX</td>
<td>9</td>
</tr>
<tr>
<td>Region 7- Midwestern</td>
<td>IA, KS, MO, NE</td>
<td>10</td>
</tr>
<tr>
<td>Region 8-Rocky Mountain</td>
<td>CO, UT, MT, WY, ND, SD</td>
<td>12</td>
</tr>
<tr>
<td>Region 9- Western</td>
<td>AZ, CA, NV, HI, Pacific Islands</td>
<td>12</td>
</tr>
<tr>
<td>Region 10 - Northwest</td>
<td>AK, ID, MT, OR, WA, WY</td>
<td>15</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>141</strong></td>
</tr>
</tbody>
</table>

TABLE 1. Accredited Local Health Departments in Regional Public Health Training Centers

*Note: MT & WY participate in 2 PHTC regions (Regions 8 & 10), but total number of LHDs is unduplicated.*
**Phase 2 – Data Collection**

A web-based quantitative survey (Appendix 2) was distributed to the LHD sample in Phase 2 of this research. The survey was designed to gauge the extent to which factors that contribute to a culture of learning are present in the LHD, as well as how learning and leadership development activities are supported within the organization. The questions in this survey were obtained verbatim from a questionnaire developed by Marsick & Watkins (2003) to examine organizational cultures of learning; some questions were also modified and newly created in order to address the various elements within each factor. This questionnaire “measures important shifts in an organization’s climate, culture, systems, and structures that influence whether individuals learn” (Marsick & Watkins, 2003). The authors argue that learning must be captured in an organization’s systems for it to be shared and used regularly; the questionnaire is built on the idea that change needs to occur at every level – from individual to organizational to environmental (2003). Questions were also adapted from the de Beaumont Foundation’s Public Health Workforce Interests and Needs Survey (Pourshaban et al, 2015), and informed by the Council on Linkages Between Academia & Public Health Practice’s [Core Competencies for Public Health Professionals](#) (2014).

The survey link was embedded within an introductory email that was sent to NACCHO Performance Management staff. This group agreed to promote the dissertation research and survey link in their Accreditation Coordinator Learning Community newsletter that is sent to the accreditation coordinators of accredited LHDs. The researcher also emailed accreditation coordinators or health officials from accredited LHDs directly. The quantitative survey consisted of Likert-scaled questions that focused on how staff perceive the group dynamic and organizational structural factors to be active in their LHD, and the extent to which they believe these factors may be contributing to a culture of learning. A Likert scale is composed of a series of four or more Likert-type items that are combined into a single composite score/variable during the data analysis process. Combined, the items are used to
provide a quantitative measure of a particular trait or element (Boone & Boone, 2012). For this dissertation research, the Phase 2 survey was divided into two parts: one part focused on group dynamic factors – including teamwork, inquiry and dialogue, empowerment toward a collective vision, and reflection. The second part focused on organizational cultural factors that included supervisor and executive level support, knowledge sharing systems, and connecting the organization to the environment. The LHD respondent indicated the extent – using a 5-point Likert scale (1= almost never; 5= almost always) – to which these factors are evident within their LHD organization. In this Phase 2 survey, there were four questions addressing each group dynamic factor and five questions addressing each organizational cultural factor.

Supplementary information was collected from each LHD, which was used to establish the sampling frame for Phase 3. The collected data included the number of FTE staff and the size of the population served in the health jurisdiction. In order for LHDs to be considered for inclusion in the Phase 3 case study, LHDs must have fewer than 100 FTE staff, and serve a population of 50,000 - 100,000. These criteria are important because, as indicated in the literature, 88% of LHDs across the nation employ fewer than 100 FTE staff (NACCHO, 2013). Furthermore, the median number of staff and FTEs has decreased in LHDs serving populations of 25,000 or more between 2010-2013 (NACCHO, 2013). Thus, the LHDs selected for inclusion in Phase 3 represent the current situation of most LHD organizations across the country.

To minimize non-responses, a reminder email was sent to the NACCHO staff and directly to the accreditation coordinators and health officials one week after the initial distribution date, and the survey remained open for one week following the reminder.
Phase 2 – Data Analysis

Since responses for the Phase 2 survey were Likert-scaled, the data was analyzed by calculating means as the summary scale scores for each group of questions under each factor being examined. There were four questions related to each group dynamic factor and five for each organizational cultural factor; there are four group dynamic factors and three organizational structural factors. Thus, there were a total of seven mean summary scale scores calculated from each completed survey. Additionally, a one-way ANOVA was used to determine whether there was a significant difference between each factor.

Phase 3 – Sampling Approach

In Phase 3, a case study approach was utilized with three LHDs – from among the responding LHDs from Phase 2 – for a more in-depth examination of the group dynamic and organizational structural factors that may be active in LHDs, and how they may be contributing to leadership competency development for the public health workforce. The case study is used, as defined by Yin (2014), to investigate a contemporary phenomenon in depth and within its real-world context. A case study approach is useful for this type of study because public health leadership development is a contemporary phenomenon that will be examined in the context of public health accreditation. Additionally, since the research questions for this dissertation research focus on what factors promote or inhibit a culture of learning in LHDs, and how they play a role in contributing to leadership development, the case study approach was most appropriate for addressing these types of questions.

LHDs were purposefully selected from both “high-support” classified PHTC regions, as well as from the “moderate-support” classified PHTC regions – as determined in Phase 1. Three LHD cases were selected, with two from a “high-support” classified PHTC region and one from a “moderate-
support” classified PHTC region. No two LHDs were from the same PHTC region. The rationale for this purposeful sampling approach was to select somewhat representative cases of the class within each group based on selection criteria and the stratification criteria; the sampling selection will ultimately yield “information-rich cases whose study will illuminate the questions under study” (Patton, 2015). The researcher aimed to select cases that shed light on which culture of learning factors are practiced in the LHD organization, and how they potentially impact leadership development for the public health workforce.

To be considered for inclusion in Phase 3, accredited LHD cases met the following criteria: have fewer than 100 FTE staff, and serve a population of 50,000-100,000. These criteria align with what the literature has revealed: 88% of LHDs across the nation employ fewer than 100 FTE staff, and the median number of staff and FTEs has decreased in LHDs serving populations of 25,000 or more between 2010-2013 (NACCHO, 2013). Because the literature implies that workforce development challenges are more pronounced in mid-sized LHDs with a less than robust workforce, these criteria were used to narrow the sample of LHDs considered for case study investigation in this phase.

Since many LHD accreditation coordinators contacted the researcher directly to indicate that they had completed the Phase 2 survey, or to request research results once the study was completed, the researcher took this communication as an opportunity to recruit LHD cases for Phase 3, while simultaneously ensuring that they met the above criteria. After LHDs were identified for selection in Phase 3, an initial meeting by phone with the LHD accreditation coordinator was arranged by the primary researcher to introduce the study purpose and gain support for the study.

**Phase 3 – Data Collection**

In this phase, a document review for each LHD case was conducted first so that any identified themes, patterns, or emergent elements would enhance the semi-structured interviews that were
subsequently conducted with LHD staff, thereby allowing for greater clarification and depth of concepts revealed in the interviews. Specific documents reviewed included the LHD workforce development plan, the LHD strategic plan and the LHD performance management/quality improvement plan. LHDs that are accredited are required to complete a workforce development plan that may provide evidence of how leadership development is promoted within its workforce, and what factors may be contributing to this promotion (PHAB, 2013). The documents were downloaded from the LHD’s website, or if unavailable there, requested directly from the LHD accreditation coordinator. Review and analysis of these documents will yield themes that align with the group dynamic and/or organizational structural factors that were studied in this research.

Semi-structured interviews were conducted with the purpose of eliciting greater depth of information around the conditions of these factors and their relationship to cultivating a culture of learning in the LHD. Some questions for the interview guide were obtained from the Marsick & Watkins (2003) organizational culture of learning questionnaire. Other questions in the guide were adapted from the Council on Linkages between Academia & Public Health Practice’s Core Competencies for Public Health Professionals (2014) to address the specific constructs being investigated in this dissertation research.

The interview guide (Appendix 3) was first be piloted with a small group (3-4) of LHD staff from a non-accredited LHD that will not be examined in this research, for readability, flow, and length. Individual interviews were conducted by phone conference with each individual key informant at each LHD. Key informants included three staff from each LHD organization: one public health professional staff person, one senior-level manager, and the accreditation coordinator. The interviews were conducted using an interview guide that probed informants about how active the group dynamic and organizational structural factors that were addressed in the web-based survey conducted in Phase 2 are within the LHD culture and environment. Interview questions delved deeper into how these factors may
be impacting the culture of learning in the LHD, and included questions that addressed trainings provided to and attended by staff, supervisor support, mentoring opportunities, communication strategy opportunities (such as facilitation) for staff, etc., as well as any additional topic areas or emerging themes identified in the document review. The questions also explored elements of the leadership competencies of interest in this research – change management, systems thinking, and strategic communication – and their connection to the aforementioned factors.

**Phase 3 – Data Analysis**

In order to adequately identify the specific factors, and external training elements, that contribute to a culture of learning, each LHD case was compared and contrasted with one another. A cross-case analysis facilitates the comparison of commonalities and differences in the activities and processes within the LHD unit of analysis (Thurmond, 2001). Furthermore, this cross-case analysis approach enabled the researcher to outline the combination of factors that may have contributed to the promotion of a culture of learning within the LHD organization, and/or leadership competency development of the LHD workforce. This approach also provided an opportunity to identify lessons learned from each case, and assisted in identifying recommendations that may benefit other LHDs similar to the LHDs investigated in this case study.

A content analysis of the workforce development plan, strategic plan, and related accreditation documents for each LHD case was conducted. Documents were reviewed for themes, patterns, and emergent topics as they relate to the group dynamic and organizational structural factors that impact learning. Such themes and patterns also included elements of the three leadership competencies – systems thinking, change management, and strategic communication – that were examined in this research to determine how they are enhanced by the factors that contribute to a culture of learning. The
findings from the content analysis were used to validate the responses from the semi-structured interviews that were subsequently conducted.

Data collected from the semi-structured interviews was recorded, transcribed and entered into the qualitative data analysis software program, Atlas Ti 8©. The program was utilized to identify and analyze patterns & themes in the survey. *A priori* data codes were developed (see Codebook, Appendix 4), but emergent codes were also developed from the analyses. This allowed for the development of themes not previously identified from the document review or not previously considered. The codes were developed from the questions in the interview guide, which focused on a more in-depth examination of the factors that contribute to a culture of learning, as well as evidence of leadership development, and also be informed by the document review. Themes were also matched with themes from the surveys analyzed from Phases 1 and 2 that culminated in a comprehensive analysis of how a culture of learning facilitates leadership development for the LHD workforce.

**Data Integration & Triangulation**

Data triangulation is valuable in determining the strength of the evidence that supports a finding (Patton, 2002). Data was triangulated through the use of multiple data sources and methodologic approaches (Thurmond, 2001). Data from each phase addressed the research questions while also informing the next phase. The data collected in Phase 1 exposed the gaps, strengths, and actions related to leadership training support. Additionally, the data collected also revealed which PHTCs appear to provide the most robust leadership training support, as well as which appear to have the strongest connection to LHDs. This will subsequently enable the researcher to classify the level of support that PHTCs provide, which will determine the level of this type of external training support that accredited LHDs (surveyed in Phase 2) may be receiving. Data from both Phase 1 and 2 allowed the researcher to select “high-support” and “moderate-support” level cases for the case study investigation in Phase 3.
Furthermore, the data from each phase addressed each of the three research questions. Both the Phase 2 survey and the Phase 3 interviews and document review addressed the first research question which calls for the specific exploration of the evidence of culture of learning factors in LHDs. The external leadership training support explored in Phase 1, the culture of learning factors investigated in Phase 2, and the in-depth examination of the evidence of these factors as they relate to leadership development in Phase 3, all contributed to answering the first research question which intends to explore the culture of learning factors. The second research question was answered by the findings from both Phase 1 and 3, as it specifically addresses leadership development for the LHD workforce. And the third research question regarding external trainings was answered by findings from Phase 1 and Phase 3.

Finally, the data from each phase also validated data from another phase, as well as identified any divergence. The data from Phase 1 was used to further probe the key informants, in Phase 3 semi-structured interviews, about the external leadership training support and how it may complement internal training support they receive within the LHD organization. Any themes or elements elucidated were used to validate findings from Phase 1. Themes relating to culture of learning factors and leadership development competencies identified from the Phase 3 interviews and document review were cross-referenced and validated by the themes and characteristics relating to the culture of learning group dynamic and organizational structural factors that emerge from the Phase 2 quantitative survey. Additionally, the data collected from the Phase 2 survey was compared with the training support landscape that is represented in the Phase 1 survey responses, particularly as the findings from each validated one another. Ultimately a comprehensive analysis was conducted at the conclusion of the third phase. These relationships are further explained in Figure 4.
Data Management

The data collected for this dissertation research was managed in a manner that ensured the anonymity of both the LHD agency and the individual LHD workforce respondents. The surveys for both Phase 1 and 2 of the dissertation study were web-based electronic surveys with no personal identifiers. For the document review in Phase 3, LHD organizational identifiers were removed and the documents were stored electronically on a password-protected flash drive. The semi-structured interviews that were also collected in this of the study were audio-recorded and transcribed by the researcher; the transcriptions were kept in a secured, locked location and did not include personal identifiers.
Validity Considerations

Multiple data sources were used to add to the “richness” of the data, which also served to avoid threats to the validity of this dissertation research (Maxwell, 1996). A combination of census and purposeful (order of operations) sampling techniques were employed throughout this dissertation research with the intent of not only refining the selection of accredited LHDs that were further examined in Phase 3, but also to obtain information about the external training and leadership development environment, gather data on the factors in currently accredited LHDs, and delve more deeply in a smaller sample of LHDs to better understand these factors and explain their contribution to leadership development for the LHD workforce. Because this research was designed to explore the extent to which particular factors are active in an LHD, and because accredited LHDs are expected to have at least minimally addressed learning and/or leadership development for their workforce, there may have been some selection bias.

Construct validity was addressed through the development of a priori codes that aligned with themes from the literature review and with the survey in each phase of this study. According to Yin (2014), construct validity refers to the extent to which the concepts are operationalized in the study in order to actually measure the items that they were intended to measure, and thus be able to answer the research question(s). For this dissertation research, the a priori codes that were used in analyzing the semi-structured interviews and document review that were conducted in Phase 3, as well as the qualitative portion of the phase 1 survey, were based on the constructs identified within the literature review that was conducted for this study.

Reliability and internal validity were assured through various methods. The primary interviewer remained the same throughout the duration of this research. Additionally, the same standardized web-based quantitative survey was distributed to each regional PHTC in Phase 1, and the same standardized
A web-based quantitative survey was distributed to accredited LHDs via their accreditation coordinator in Phase 2. In Phase 3 of the research, the same standardized interview guide was used for the key-informant semi-structured interviews. Additionally, the interviews were recorded to ensure that verbal data details were captured accurately. Both the web-based surveys and the semi-structured interview guide were pilot-tested for readability and comprehension. While the primary researcher was conducting the data analysis for all three phases, a secondary evaluator also coded at least ten percent of the extracted data using the codebook to validate the codes in the qualitative data collected.

With regard to external validity, the sampling methodology used in this study did not lend itself to generalizability. However, there may be some opportunity to translate some of the research findings and relevant learnings to LHDs that are similar to the LHDs sampled in this study, i.e. other accredited LHDs. Additionally, there may be lessons learned gleaned from the data analysis of this research on the role of factors that contribute to a culture of learning that may be useful for LHDs that are not yet accredited. Additionally, the researcher aims to describe findings that will be of some value to the LHDs that are surveyed, in that they may help to identify factors that the LHD can implement or continue to build upon in order to cultivate a culture that maximizes the capacity of their workforce.
IV. RESULTS

External Training Support: Public Health Training Centers

As part of the first phase of research, all ten regional Public Health Training Center (PHTC) coordinators were sent an email request for their voluntary participation in a survey; contact information for the ten PHTC coordinators was obtained with the assistance of the National Network of Public Health Institutes (NNPHI). The aim of this mixed methods survey was to explore the role that PHTCs play in developing cultures of learning – as well as leadership development – for the LHDs in their respective region. The PHTC coordinator input was critical to further understand the factors external to local health departments that impact learning opportunities that foster leadership development for the local health department workforce. Nine PHTC coordinators (90%) responded to, and completed the survey. PHTC coordinators were asked which leadership training areas – from the list below – were offered to LHDs in their respective regions within the past five years:

- Vision and mission development
- Change management
- Working with diverse populations
- Communication and consistent messaging
- Collaborative relationships
- Group problem solving
<table>
<thead>
<tr>
<th>Leadership Topic Area</th>
<th># of PHTCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working with diverse populations</td>
<td>8</td>
</tr>
<tr>
<td>Collaborative relationships</td>
<td>8</td>
</tr>
<tr>
<td>Change management</td>
<td>7</td>
</tr>
<tr>
<td>Group problem solving</td>
<td>3</td>
</tr>
<tr>
<td>Vision &amp; mission development</td>
<td>2</td>
</tr>
<tr>
<td>Cultural humility</td>
<td>1</td>
</tr>
<tr>
<td>Emotional intelligence/ self-awareness</td>
<td>1</td>
</tr>
</tbody>
</table>

TABLE II. Summary of leadership training opportunities offered by PHTCs (n=9).

Most of the PHTCs offered trainings in leadership topic areas. Eight PHTCs offered trainings in working with diverse populations and collaborative relationships; seven offered trainings in change management – these are the top three training topic areas offered by PHTCs. Only three regional PHTCs facilitated trainings in group problem solving, and only two facilitated trainings in vision and mission development. PHTCs were also provided an opportunity to add any additional trainings they offer. One PHTC stated that they have also provided trainings in cultural humility/competency and emotional intelligence/self-awareness.

PHTCs were asked to indicate the proportion of the training types that are offered to LHDs, as well as the frequency with which they are offered.
Seven PHTCs stated that 51% or greater of their trainings are web-based. Five PHTCs indicated that they offer these web-based trainings more than once a month, while three PHTCs specified that their web-based trainings are either archived or accessible through an online learning management tool that is accessible to public health professionals at any time.
When compared to in-person trainings in a typical training year, seven PHTCs indicated that less than half of their trainings are offered in-person. However, of note is that all nine PHTC respondents also indicated that they provide both classroom course style and blended (lecture/interactive workshop) in-person trainings. With regard to the frequency in which in-person trainings are offered, the responses varied: three PHTCs indicated that they are offered 1-2 times per quarter, two PHTCs stated that they are offered once a month, and three stated that they are offered more than once a month. One PHTC described that their in-person trainings are conducted on request, and occur less frequently than annually. The location of these trainings also varied: six PHTCs stated that their in-person trainings are offered onsite at the LHD, and seven PHTCs described that other community or conference venues are selected.

![Figure 7. Attendance at PHTC trainings by type of LHD staff.](image)

With regard to attendance, five PHTCs indicated that 50% or more of their trainings were attended by frontline staff (community health workers, field nurses, etc.), while five PHTCs indicated that middle and senior-level management staff attended 25-49% of their trainings. Five PHTCs indicated that their training attendees range in age between 36-45 years old.
PHTCs were also asked questions about the level and extent of LHD participation in their trainings. Each PHTC region serves LHDs across a minimum of four to a maximum of eight states; the number of accredited LHDs as of January 1, 2017 in each PHTC region ranges from four to forty-six. Seven PHTCs indicated that more than 10 LHDs participated in trainings in the last 12 months.

<table>
<thead>
<tr>
<th>Training Needs Methods</th>
<th># of PHTCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs assessment</td>
<td>9</td>
</tr>
<tr>
<td>Advisory/steering committee; input from LHDs</td>
<td>8</td>
</tr>
<tr>
<td>National workforce assessment data</td>
<td>5</td>
</tr>
<tr>
<td>Council on Linkages Competencies</td>
<td>2</td>
</tr>
</tbody>
</table>

TABLE III. Methods used by PHTCs to identify training needs.

PHTC coordinators also responded to several open-ended questions addressing how training needs for LHDs were identified and how they were prioritized. All nine PHTC respondents stated that training needs and priorities were identified using needs assessments conducted with their LHD partners. Eight PHTCs explicitly mentioned that they consult with an advisory or steering committee regularly as a mechanism for identifying training needs and priorities, in addition to eliciting input from LHDs through other means – including needs assessments, key informant interview, and meetings with LHD executive-level staff. Five PHTCS specifically indicated that they also used national workforce assessment data to inform their training curriculum, and two indicated that they also referred to the Council on Linkages competency set to determine training focus areas.

With regard to any additional training support that the PHTC provides to LHDs in their region, three PHTCs stated that they provide assistance with workforce development planning to LHDs. One PHTC affirmed that they also partner on training events and conferences with LHDs and professional
associations, as well as provide assistance to LHD programs, provide LHD staff with opportunities to mentor, and have linked LHD mentors to their own PHTC training resources.

**Culture of Learning Factors: Accredited Local Health Departments**

LHDs that are accredited are required to undergo efforts related to workforce development that also address leadership development. This doctoral research focused on surveying accredited LHDs with the purpose of identifying evidence as to how a culture of learning might be promoted within its workforce, and what factors may be contributing to this promotion. The sampling approach entailed a census sampling of LHDs that have received accreditation status from PHAB as of January 1, 2017. This assured that all LHDs included in the sample met the minimum criteria of having a workforce development plan as outlined in PHAB Competency 8, and allowed for at least a level baseline standard for comparison and inclusion. The primary researcher contacted LHD accreditation coordinators with the assistance of NACCHO’s Performance Improvement unit. A brief description of the research being conducted, including the hyperlink to a web-based survey, was sent electronically to NACCHO’s Accreditation Coordinators Learning Community. Because this community also consists of LHDs in the process of obtaining accreditation status, the researcher also specified that only LHDs that have received accreditation status as of January 1, 2017 are invited to participate, and also added a question on the survey to verify whether accreditation status was obtained before January 1, 2017 or after. Additionally, the researcher used PHAB’s database of accredited LHDs ([http://www.phaboard.org/news-room/accredited-health-departments/](http://www.phaboard.org/news-room/accredited-health-departments/)) to send electronic invitations to participate directly to LHD accreditation coordinators.

As of January 1, 2017, there were a total of 141 accredited LHDs – all located across the country. The primary researcher sent a reminder email to the LHD accreditation coordinator – as well as a phone call – 7-10 days after the initial distribution date, and the survey remained open for
approximately one and one half weeks following the reminder. Nonetheless, only a total of 24 surveys were completed by LHDs – a response rate of 17.0%. The LHDs that responded were located in various states across the country; all were accredited on or before January 1, 2017.

The survey used a 5-point Likert scale (1= very rarely; 5= very frequently) that indicated the level of frequency to which these factors are active within the LHD organization. The Likert-scaled survey consisted of four questions for each group dynamic factor and five questions for each organizational factor; there are four group dynamic factors and three organizational structural factors. Scale scores were developed from the additive score of each of the four group dynamic factors scores, and from each of the three organizational cultural factors scores. Hence, there were a total of 31 questions aimed at exploring the frequency of occurrence for specific activities that illustrate the presence of the factors being studied. The lowest possible score for each question was 1 (very rarely) and the highest score for each question was 5 (very frequently). A “Cronbach’s alpha” test was also conducted to measure the internal consistency and reliability of the constructed scales in the Likert-scaled survey. The results of this analysis revealed an alpha value that ranged between 0.88 and 0.92 for each group dynamic factor; alpha values for each organizational cultural factor ranged between 0.71 to 0.74. The alpha values indicate that the questions on the survey ranged from acceptable to high reliability, indicating that there is consistency and reliability in the data. Results of the “Cronbach’s alpha” test can be found in the Appendix.
Mean scale scores were calculated for each culture of learning factor; median scores were also identified. The lowest possible mean scale score for each group dynamic factor was 4, and the highest possible mean scale score was 20. The highest scoring group dynamic factors were *teamwork* and *empowerment toward a collective vision*, with mean scale scores of 15.5 and 15.1 respectively. The lowest possible mean scale score for each organizational cultural factor was 5, and the highest possible mean scale score was 25. The highest scoring organizational cultural factor was *connecting organization to the environment* with a mean scale scores of 20.0. Furthermore, there is little variability between the mean score and median score for each factor, signifying that the data is not skewed and may be normally distributed.

Scale scores were examined for each factor to determine whether there is a significant difference between each factor using a one-way ANOVA. A difference would signify that there may be one or more factors that are more or less evident in LHD agencies, which could ultimately impact what factors

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<table>
<thead>
<tr>
<th>Factor Group</th>
<th>Factor</th>
<th>Mean Score</th>
<th>Median Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group dynamic</td>
<td>Inquiry &amp; dialogue</td>
<td>14.3</td>
<td>14.0</td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
<td>15.5</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>Collective vision</td>
<td>15.1</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>Reflection</td>
<td>13.9</td>
<td>14.0</td>
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</table>

TABLE IV-A. Mean Score Summary – Group Dynamic Factors.

<table>
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<th>Factor Group</th>
<th>Factor</th>
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<th>Median Score</th>
</tr>
</thead>
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<tr>
<td>Organizational</td>
<td>Supervisor support</td>
<td>19.1</td>
<td>20.0</td>
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<tr>
<td>structural</td>
<td>Knowledge sharing</td>
<td>19.2</td>
<td>19.5</td>
</tr>
<tr>
<td></td>
<td>Connecting organization to</td>
<td>20.0</td>
<td>19.5</td>
</tr>
<tr>
<td></td>
<td>environment</td>
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</tr>
</tbody>
</table>

TABLE IV-B. Mean Score Summary – Organizational Cultural Factors.
may, or may not, be contributing to a culture of learning. The null hypothesis is that there is no difference between the mean scores for each factor.

**SUMMARY**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Count</th>
<th>Sum</th>
<th>Mean</th>
<th>Variance</th>
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<tr>
<td>Inquiry &amp; Dialogue</td>
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<td>344</td>
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<td>Collective vision</td>
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<td>362</td>
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<td>5.56</td>
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<tr>
<td>Reflection</td>
<td>24</td>
<td>334</td>
<td>13.92</td>
<td>7.04</td>
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**ANOVA**

<table>
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<tr>
<th>Source of Variation</th>
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<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
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<tbody>
<tr>
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<td>11.76</td>
<td>1.71</td>
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<tr>
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<td>92</td>
<td>6.88</td>
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<tr>
<td>Total</td>
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<td>95</td>
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</tbody>
</table>

**TABLE V. ANOVA: Group Dynamic Factors.**

The ANOVA analysis for the group dynamic factors is shown in Table 5. The F statistic of 1.71 is not greater than the F (critical value) of 2.70, therefore the null hypothesis cannot be rejected, and there is no significant difference between the mean scores of each group dynamic factor. This indicates that there is no difference in the perceived contribution of these group dynamic factors to a culture of learning in the LHDs that responded to the survey.
<table>
<thead>
<tr>
<th>Groups</th>
<th>Count</th>
<th>Sum</th>
<th>Mean</th>
<th>Variance</th>
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</thead>
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<td>459</td>
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<td>15.94</td>
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<tr>
<td>Knowledge sharing</td>
<td>24</td>
<td>460</td>
<td>19.17</td>
<td>14.23</td>
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<tr>
<td>Connecting org to env</td>
<td>24</td>
<td>481</td>
<td>20.04</td>
<td>9.43</td>
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</table>

**ANOVA**

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<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
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<tbody>
<tr>
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<td>0.62</td>
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<td>Within Groups</td>
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<td>69</td>
<td>13.20</td>
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<tr>
<td>Total</td>
<td>923.78</td>
<td>71</td>
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</tbody>
</table>

TABLE VI. ANOVA: Organizational Structural Factors.

The ANOVA analysis for the organizational structural factors is shown in Table 6. The F statistic of 0.49 is not greater than the F (critical value) of 3.13, therefore the null hypothesis cannot be rejected, and there is no significant difference between the mean scores of each organizational cultural factor. This indicates that there is no difference in the perceived contribution of these organizational cultural factors to a culture of learning in the LHDs that responded to the survey.
LHD Case Study Results

In the final phase of research, a case study approach was utilized with three LHDs. The initial research proposal stated that a minimum of two and a maximum of four LHDs – from among the LHDs that responded to the web-based survey – would be selected for the case study phase, but only three LHDs agreed to participate. In order for LHDs to be considered for inclusion in the Phase 3 case study, LHDs needed to have fewer than 100 FTE staff, and serve a population of 50,000 - 100,000. These criteria are important because, as indicated in the literature, 88% of LHDs across the nation employ fewer than 100 FTE staff, and the median number of staff and FTEs has decreased in LHDs serving populations of 25,000 or more between 2010-2013 (NACCHO, 2013).

Two of the three LHDs selected came from “high-support” classified PHTC regions, and one LHD came from a “moderate-support” classified PHTC region; no two LHDs were selected from the same PHTC region. As mentioned previously, an initial scan of the PHTC websites and findings from the literature regarding the importance of leadership competency development, training opportunities and challenges for LHD staff, led to the development of the following classification criteria:

- Evidence of training(s) in systems thinking, strategic communication, and/or change management offered to LHDs within the past five years,
- At least two types of training formats offered per year,
- An average participation rate of at least 10 LHD staff, and
- An indication that LHD staff of various job classifications (e.g. program managers, senior supervisors) participate.

PHTCs that responded to the PHTC mixed methods survey, and met all of the above criteria were classified as “high-support” PHTCs; PHTCs that met at least two of the above criteria were classified as “moderate-support” PHTCs. Efforts to recruit a fourth LHD from a “moderate-support” PHTC region
were made in order to further enrich the data, but no additional LHDs agreed to participate in this study.

The rationale for this purposeful sampling approach is to select somewhat representative cases of the class within each group based on selection criteria and the stratification criteria. The LHDs are referred to in the subsequent analysis as A, B, and C.

<table>
<thead>
<tr>
<th></th>
<th>FTE Staff</th>
<th>Population Served</th>
<th>Type of Jurisdiction</th>
<th>PHTC Region</th>
<th>PHTC Region Type</th>
<th>Year Accredited</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHD A</td>
<td>30 FTE</td>
<td>54,080</td>
<td>Suburban/ rural</td>
<td>Region 9 – Western</td>
<td>Moderate support</td>
<td>2016</td>
</tr>
<tr>
<td>LHD B</td>
<td>51 FTE</td>
<td>50,375</td>
<td>Suburban/ rural, adjacent to metro area</td>
<td>Region 4 – Southeastern</td>
<td>High support</td>
<td>2013</td>
</tr>
<tr>
<td>LHD C</td>
<td>17 FTE</td>
<td>86,769</td>
<td>Suburban, adjacent to metro area</td>
<td>Region 5 – Great Lakes</td>
<td>High support</td>
<td>2014</td>
</tr>
</tbody>
</table>

TABLE VII. LHD Case Profile.

While all three LHDs self-classified as suburban, one LHD is located in the Great Lakes region, one is located the mid-Eastern region, and one situated in the Western region of the United States. All three LHD cases meet the selection criteria for inclusion in the case study phase, but there is variability in the number of FTE staff in each LHD. This variability may impact the study results with regards to the group dynamic and/or organizational cultural factors that are active in the LHD organization. There is also variability in the year each LHD became accredited; the amount of time since accreditation may contribute positively to whether the factors that contribute to a culture of learning have become more well-established within the LHD.
This case study phase involved a more in-depth examination of the group dynamic and organizational structural factors that may be active in LHDs, and how they may be contributing to leadership competency development for the public health workforce. *A priori* codes based on the literature were used to identify specific elements that characterize each factor; emergent codes were also applied to the analysis.

In this phase, a document review for each LHD case was conducted first so that any identified themes, patterns, or emergent elements could enhance the semi-structured interviews that were subsequently conducted with LHD staff. Specific documents reviewed included the LHD’s workforce development plan, the strategic plan, and the performance management/quality improvement plans. The documents were either downloaded from the LHD’s website by the primary researcher, or directly requested via email from the LHD accreditation coordinator.

Semi-structured interviews were subsequently conducted with the purpose of eliciting greater depth of information around the conditions of these factors and their relationship to cultivating a culture of learning in the LHD. Three individual staff from each LHD were interviewed: the accreditation coordinator, one senior-level manager, and one public health professional staff person. Some questions for the interview guide were obtained from the Marsick & Watkins (2003) organizational culture of learning questionnaire. Other questions in the guide were adapted from the Council on Linkages between Academia & Public Health Practice’s *Core Competencies for Public Health Professionals* (2014) to address the specific constructs being investigated in this dissertation research.

**Group Dynamic Factors**

Group dynamic factors, described in the literature as drivers of learning within an organization, were present in both the document analysis and the LHD staff interviews. These group dynamic factors
– identified in the original conceptual model – include inquiry and dialogue, teamwork, empowerment toward a collective vision, and reflection.

*Frequency & Summary of Themes*

The table shows a brief summary of the most predominant elements of each group dynamic factor for each LHD in this case study analysis. As the table depicts, similarities among the three LHDs were present, as were some identified differences.
<table>
<thead>
<tr>
<th>Inquiry &amp; dialogue</th>
<th>LHD A</th>
<th>LHD B</th>
<th>LHD C</th>
</tr>
</thead>
</table>
| Face-to-face interactions | • Multidisciplinary teams  
• Talk to each other to share experiences | • Multidisciplinary teams  
• Staff participation on community coalitions and committees | • Multidisciplinary teams  
• Staff participation on community coalitions and committees  
• In-person trainings |
| Feedback | • Solicitation of staff input into plans | • Solicitation of staff input into plans | • Solicitation of staff input into plans |
| Teamwork | Community collaborations | • CHIP subcommittee | • Community advisory bodies & councils |
| Team participation | • Performance management team  
• Internal committees & small groups | • Performance management team  
• Internal committees & small groups | • Performance management team  
• Internal committees & small groups |
| Empowerment toward a collective vision | Shared decision-making | • Internal planning workgroups | • Policy review committees  
• Monthly staff meetings  
• Identifying work objectives beyond normal job duties |
| Vision-setting | • Brainstorming sessions to identify organizational vision & goals | • N/A | • N/A |
| Reflection | Reflection | • Reflecting on staff’s professional development | • Encouragement of staff to challenge mental models  
• Reflecting on deeper meaning of work |
| Comparison between LHD cases | • Similarities: Face-to-face interactions, Feedback & Team participation  
• Differences: Community collaborations, Shared decision-making, Reflection  
• Only LHD with evidence of Vision-setting | • Similarities: Face-to-face interactions, Feedback, Community collaborations (C), Team participation (C), & Reflection (C)  
• Differences: Shared decision-making  
• NO evidence of Vision-setting | • Similarities: Face-to-face interactions, Feedback, Community collaborations (C), Team participation (C), & Reflection (C)  
• Differences: Shared decision-making  
• NO evidence of Vision-setting |

TABLE VIII. Summary of Group Dynamic Themes Within Each LHD.
Inquiry & dialogue

Inquiry and dialogue is characterized by staff having the opportunity to share their perspective with colleagues – this was initially noted by the *a priori* code ‘sharing perspective.’ Through this analysis, ‘sharing perspective’ was re-coded as ‘face-to-face interactions,’ because the LHD cases highlighted face-to-face situations where perspectives and ideas were shared. The inquiry and dialogue factor is also characterized by the ability of LHD staff to request for and receive feedback from senior-level staff members on a consistent basis, which was coded as ‘feedback.’ The literature also further defines this factor as being evidenced by the ability of the workforce to experiment, so the *a priori* code ‘creative thinking’ was developed. However, this code was not used because no specific examples of this element were found in the text of the documents analyzed, or the examples provided by the interviewees.

*Face-to-face interactions.* Face-to-face interactions is defined as face-to-face situations where perspectives and ideas were shared. Examples of face-to-face interactions were evident in all three LHD cases. One substantive example was mentioned in LHD A’s quality improvement plan:

“*The PMT [Performance Management Team] will be an informal committee composed of interested staff members of various backgrounds. Participation of at least one staff member from each Division is encouraged to ensure that perspectives of each division are taken into consideration in charting the course and work of the PMT.*” [LHD A]

LHD A’s efforts in creating a committee of staff from various health professional or health specialty backgrounds – as the respondent shares above – creates a multidisciplinary approach. This type of approach was also mentioned in the workforce development plan from this same LHD, which included a stated goal to “establish a training committee that is multidisciplinary.”

The theme of utilizing a face-to-face multidisciplinary approach continued in the interviews. A respondent from LHD C shared that “Staff are working with community members to do the work. Staff
are involved in lots of different coalitions and committees, for example, the family resource center board.” Similarly, LHD B respondents state they are very involved in community initiatives with various community partners in an effort to learn what they do and share ideas.

LHD staff also described instances of staff being able to express their views and attempt to problem-solve in a face-to-face environment. Respondents from LHD A mentioned that staff practice this in daily work activities: “Staff are encouraged to talk to each other day-to-day to share experiences and go out in teams to resolve situations.” LHD C interviewees elaborated on how in-person training opportunities can provide fresh perspective for staff. When asked about the learning opportunities that staff have engaged in, one interviewee stated the following:

“Face-to-face trainings are great for networking – I believe this is a huge benefit. I just completed a 3-day training course – and came home inspired and renewed...refreshed. They give you new perspective, even though the info may not necessarily be all new. It's like reading the same novel three times – you pick out different things each time. Face-to-face is more appealing to all of your senses versus sitting at the computer. Seeing people and reconnecting, and sharing experiences, situations, and ideas.” [LHD C]

Despite efforts to foster face-to-face interactions, staff respondents also cited a lack of trust and/or willingness as barriers to such interactions. LHD B’s strategic plan stated that there was a “lack of trust/willingness to participate” in group activities that may inhibit opportunities for feedback between employees, and sharing of perspective, to occur.

Feedback. Feedback is defined as the ability of LHD staff to request for and receive feedback from senior-level staff members on a consistent basis. With regard to providing feedback, this element was present in the documents that pertain to LHD A and B. LHD A’s workforce development plan, in addition to being reviewed annually by management, stated that “Staff members will be encouraged to review and provide input to improve the plan.” LHD A’s strategic plan also stated that “input from staff brainstorming sessions” was used to develop the content of the plan. Relatedly, LHD B’s strategic plan
“included input from all staff who participated in visioning, reviewed data, completed assessments and developed goals and objectives during quarterly all staff meetings.”

The feedback element was also described by staff interviewees. LHD staff from all three cases shared that opportunities to give and provide feedback exist across the various levels of the organizational hierarchy. One interviewee from LHD A stated “staff often bring ideas to senior-level staff…all staff are valued and listened to.” Another interviewee from LHD C indicated that idea sharing between staff and supervisors/managers is well-supported. According to one respondent:

“Each department has a monthly team meeting; all staff meetings happen 4 times a year where feedback and input solicited. We send out surveys and assessments, and do a good job of letting staff voices be heard. Staff as a whole has become more open and able to provide input and be involved in the decision-making process. For example, as part of our strategic planning process, we send out an all staff email to ask if goals are realistic.” [LHD B]

In summary, all three LHDs cited examples of inquiry and dialogue in their organization. Both the documents and the staff interviewees revealed the presence of face-to-face interactions through staff meetings, trainings, and participation in multidisciplinary teams. In the aforementioned examples describing these opportunities, staff were brought together to share ideas and consider other perspectives in resolving issues and challenges. Additionally, the LHDs in this case study also cited such challenges as staff feedback not being explicitly invited, as well as a lack of trust which may inhibit or discourage the sharing of ideas and perspectives.

Teamwork

As stated in an earlier chapter, teamwork is defined in the literature as “collaboration and team learning” (Yang et al, 2004). For the purposes of this dissertation research, this construct was identified in the documents and interviews with the following a priori codes: community collaborations and team participation. ‘Team participation’ encompassed the involvement of LHD staff working together in
committees or groups. The ‘community collaborations’ code captured occurrences of staff collaborating with external community partners on projects and/or community health initiatives. These codes often co-occurred because examples or instances of ‘community collaborations’ were also coded as ‘team participation.’

Team participation. Team participation is defined as the involvement of LHD staff working together in committees or groups. In the documents analyzed, LHDs provided several examples of staff participation on work groups within the organization. For example, LHD B’s strategic plan mentioned the use of committees and small groups when seeking input from staff to identify areas of improvement with regard to addressing the needs and concerns of the community they serve. Similarly, LHD A’s workforce development plan states that the LHD “promotes the team concept and discourages staff from working in silos.” Additionally, the quality improvement (QI) plans of all three LHDs referenced staff participation on performance management or quality improvement teams that were responsible for overseeing the implementation of the plan. For example, LHD C “established a QI Core Team in 2010 that is comprised of management and staff members…All staff will be given an opportunity to participate in the Core Team on a rotating basis. This is intended to orient all staff to the Performance Management System.” This core team addresses performance management, workforce development, and accreditation. Similarly, LHD A’s performance management team works closely with division managers to cultivate a culture focused on quality improvement, and encourages all staff to be a member of this team, as well as take a lead role in QI projects. Encouraging staff participation in tackling quality improvement projects is a primary way that was identified in promoting team participation for these LHDs.

In the interviews, LHD B respondents emphasized the importance of their agency’s efforts in convening staff to obtain multiple perspectives. For example, one staff member stated:
“We know there’s no ‘I’ in team. Everything is really a team approach. When we say team, we aren’t talking about just 2 people and probably not 3.” We want at least 4 to 5 people at the table. We like to hear others’ opinions and thoughts; the more people the better.” [LHD B]

The importance of building teams was highlighted by LHD A to “build camaraderie to build relationships.” Because of this, “95% of staff are engaged in internal committees” in the LHD organization. As an example, LHD B is physically housed in separate facilities, but brings teams from the different units in these separate facilities to work together on projects:

“Teamwork is fundamental in everything. Our health department is in two separate buildings approximately one mile apart. At times the programs and units in each building, there is a siloed feeling. But thru the accreditation process, these units have been brought together – each one is a key ingredient in a recipe. There is a conscious effort to bring units together on projects to get multifaceted perspectives – to create materials and have discussions.” [LHD B]

Teams were also convened to problem-solve strategically. In LHD C, a staff interviewee shared the following:

“We needed to screen more than 200 people as part of a [TB] contact investigation. We had to convene a team to identify the best way to address the process and logistics of conducting a mass screening. We worked through that as a group.” [LHD C]

Community collaborations. Community collaborations was defined as occurrences of staff collaborating with external community partners on projects and/or community health initiatives. Evidence of community collaborations in the documents was demonstrated by involvement of staff in accreditation activities. In LHD A’s strategic plan, “Staff members are Leads or Co-Leads for CHIP Subcommittees… Staff members also sit as members in every other applicable subcommittee, lending their support, knowledge base, and guidance to its leaders.”
In the interviews, staff emphasized that community collaborations enable their LHD organization to adopt innovative approaches to health issues by considering multiple perspectives. In LHD A, one staff member noted the following:

“All staff are engaged in different relationships with community partners; we are currently piloting a community health worker program for the whole state. It has been received very favorably and has engaged our hospital and sheriff partners. It has already secured funding for the next 3 years.”

On a related note, a staff interviewee from LHD B shared the following:

“The local health department tends to take lead role though it varies depending on issue. We always bring the community back to what’s evidence-based. In some situations, we take more of a backseat- for example, transportation issues may largely be responsibility of transportation department but Public Health will have a seat at the table to lobby for bike lanes and point to evidence that suggests this improves the community’s health.” [LHD B]

Additionally, another LHD B staff respondent stated that many of their staff participate in committees with community partners: “Many staff sit on advisory bodies and councils external to the health department. For example, there are staff on a reading mentorship program, a snack board, etc."

Similarly, staff from LHD C stated that many of them participate in “lots of different coalitions and committees” in the community they serve, which enables them to share ideas and support each other’s work.

However, LHD staff interviewees also identified the challenges in team involvement. One LHD B staff respondent stated that teamwork “continues to be a challenge. It’s hard to get everyone included.” An LHD A staff respondent declared that “staff has dwindled and staff have little time to dedicate to external teamwork opportunities.”
It is apparent that teamwork is a factor that is demonstrated in the operations of all three LHDs. vis-à-vis participation in internal and external committees, and groups whose main responsibility is to address areas for improvement for the LHD. However, it is important to note that there were also challenges raised by staff from all three LHDs that have negatively impacted their work in teams. These challenges include the inability to have all staff participate, as well as attrition and decreased funding – both of which impact the available time that remaining staff have to engage in team opportunities.

Empowerment Toward a Collective Vision

In this dissertation research, empowerment toward a collective vision was characterized by two main elements. The first element was the shared responsibility of decision-making among LHD staff, which was initially coded as ‘shared decisions,’ but later renamed as ‘shared decision-making’ to more accurately capture evidence of this activity. The second element was identified as the involvement of staff in vision-setting development and implementation, which was coded as ‘vision-setting.’ The empowerment toward a collective vision construct is also represented in the literature as staff commitment to their work, but this code was eliminated during the analysis phase. It was subsequently deemed by the researcher to be too broad as there are various ways in which staff may demonstrate commitment to their work that may not necessarily be related to shared ownership and implementation of organizational vision.

Shared decision-making. Shared decision-making was defined as shared responsibility of decision-making among LHD staff; it was an element that appeared only once in two documents for two separate LHD cases. As described in its workforce development plan, LHD C has incorporated a strategy to involve each individual staff member in an aspect of shared decision-making: “At the beginning of the annual review period, employees work with their supervisors to identify objective(s) that are considered above and beyond their normal job duties…” The participation of each individual
staff member in meeting with their supervisor promotes the shared responsibility in identifying
performance objectives. LHD B’s strategic plan states that “some staff felt they had little input on
decision-making.” This illustrates that an LHD’s efforts to involve and engage staff in this process may
need to be further explored.

Shared decision-making was only superficially mentioned by at least one interviewee from each
LHD case. According to LHD A interviewees, staff are encouraged to participate in internal
workgroups so that they have a voice in planning and can make decisions for the LHD organization. An
interviewee from LHD C conducts monthly staff meetings where “new ideas are brought to the table
and input is solicited but it is a setting where staff can share in making decisions.” Staff also stated that
this LHD maintains an environment where staff’s ideas are welcome and solicited during staff meetings
in an attempt to promote shared decision-making. Similarly, in LHD B, staff are invited to review
policies and are invited to be part of other teams and committees. Both of these examples from each of
these LHDs were supported in the LHD quality improvement plans. However, of note, in referencing
their staff satisfaction surveys, interviewees from LHD B stated that “shared decision-making is always
the lowest score.” Despite the fact that they “feel like we give them a lot of opportunity, a lot more than
we used to,” there are staff that don’t feel like they are invited to take part in making decisions.

Vision-setting. Vision-setting was defined as the involvement of staff in vision-setting
development and implementation. It was not identified in the LHD documents that were analyzed as
part of this dissertation research. Vision-setting was only mentioned by one LHD staff respondent. In
LHD A, staff participated in brainstorming sessions that helped to identify an organizational vision and
goals which subsequently informed the LHD’s strategic plan.

While all three LHDs demonstrated some aspect of empowering staff to work toward a
collective vision, only LHD B provided examples of shared decision-making that were validated by
both its documents and interviews. All three agencies share the concept of inviting staff and/or partner groups to be involved in making decisions to guide aspects of the LHD’s work. It is important to note the challenges in inviting each individual staff member to participate in this process – even though this was only explicitly stated by LHD B interviewees.

Reflection

The reflection factor – which is described as staff being given time and space to explore meaning in their work – was identified by the \textit{a priori} code, ‘reflection.’ Reflection was not explicitly cited in any of the documents analyzed in this case study, but was described in the staff interviews from all three LHDs. One LHD C interviewee stated that through the accreditation process, LHD staff now feel “challenged to look at things differently…In creating a culture where learning is encouraged, staff now ask ‘What else can I do?’ whereas they did not ask this question previously.” This example highlights how staff are stimulated to challenge their mental models and consider different perspectives. Along a similar vein, an LHD B respondent stated that staff are constantly asked ‘why’ – “we use 5 whys in projects and teamwork.” Additionally, staff explored meaning in their work by reflecting on innovative solutions that contradict their mental models of certain health issues: in addressing an increase of intravenous drug use, staff were challenged to design a syringe exchange program with community partners because this approach contradicted with their mental model of how they viewed this particular health problem.

Reflection was also encouraged in the area of staff development. Interviewees from LHD A also pointed out that supervisors in their LHD constantly ask staff where they want to be in five years – not just in looking at how to help develop them so they benefit the organization, but also looking for how to help develop them so that they grow professionally. These examples demonstrate that staff are not
simply being permitted to explore the meaning in their work on their own, but are also being challenged to explore this deeper meaning as it relates to their work and to their public health career.

**Summary of Group Dynamic Factors**

Group dynamic factors were evident in the documents reviewed from all three LHD cases as well as in the staff interviews. There appeared to be more evidence for the *inquiry and dialogue* and *teamwork* factors, as compared to the *empowerment toward a collective vision* and *reflection* factors. Nonetheless, evidence of all four factors indicates that these factors are present and active in each of the LHD cases, no one LHD case was more pronounced in its exhibition of group dynamic factors as a whole.

**Organizational Cultural Factors**

Evidence of the organizational cultural factors – supervisor support, knowledge sharing, and connecting the organization to the environment – were also identified and analyzed in the strategic plan, quality improvement plan, and workforce development plans of the three LHD cases, as well as by the staff interviewees. These organizational cultural factors – which are also included in the original conceptual model – help to build an organization’s capacity to support and encourage learning of its workforce (Marsick & Watkins, 2010).

**Frequency & Summary of Themes**

The following table shows a brief summary of examples for each group dynamic factor for each LHD in this case study analysis. As the table depicts, there are both similarities among the three LHDs as well as identified differences.
<table>
<thead>
<tr>
<th><strong>Supervisor Support</strong></th>
<th><strong>LHD A</strong></th>
<th><strong>LHD B</strong></th>
<th><strong>LHD C</strong></th>
</tr>
</thead>
</table>
| **Supervisor support** | • Supervisor-employee joint review of training opportunities  
• Managerial support in leadership development for staff | • Executive level support and encouragement for learning opportunities  
• Supervisor-employee joint review of training opportunities  
• Flexibility in work hours to accommodate learning opportunities | |
| **Organizational support** | • Culture of professional development  
• Partnership with local health education campuses  
• Researching community resources and education  
• Dedicated staff time for professional development | | • N/A |
| **Staff motivation** | • Employee recognition  
• Celebration of staff accomplishments  
• Employee recognition  
• Workshops & teambuilding activities  
• Staff identification of training needs, interests | • Staff encouraged to look for ways to improve  
(Accreditation Policy)  
• Results-Oriented Work Environment (performance valued over physical presence)  
• Flexible work schedules  
• Staff identification of training needs, interests | |
| **Permission to fail** | • LHD QI processes | • Staff encouraged to look for ways to improve | |
| **Knowledge-sharing Systems** | **Learning systems** | • Cross-training of staff  
• Access to coaching for supervisors  
• Quarterly lunch & learn sessions  
• Attendance to offsite conferences & institutes  
• Cross-training of staff  
• Quarterly QI staff meetings  
• Online & face-to-face learning opportunities  
• Attendance to offsite conferences & institutes | • Online & face-to-face learning opportunities  
• Attendance to offsite conferences & institutes | |
| **Mentoring** | • Mentoring of nursing and graduate students  
• Networking at conferences  
• Mentoring of nursing and graduate students  
• Networking at conferences  
• Implementation of formal staff mentoring program | | • Mentoring of nursing and graduate students  
• Networking at conferences  
• Informal mentoring  
• Implementation of formal staff mentoring program |
| **Connection of Organization** | **Understanding organization** | • Linkages between Strategic Plan and  
• Improved branding  
• Enhanced | • Enhanced community network |
CHIP: sharing of health resources, data & promotion of collaboration
- Collaboration with Board of Health

<table>
<thead>
<tr>
<th>LHD Impact</th>
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</thead>
<tbody>
<tr>
<td>• Building community relationships due to accreditation process</td>
</tr>
<tr>
<td>• Building community relationships due to accreditation process</td>
</tr>
<tr>
<td>• Staff ability to explain LHD’s relationship with partners, &amp; their role as parts of a larger system</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison between LHD cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Similarities: Supervisor support (C), Staff motivation (B), Learning systems, Mentoring, LHD impact (C)</td>
</tr>
<tr>
<td>• Differences: Organizational support, Understanding organization</td>
</tr>
<tr>
<td>• Similarities: Staff motivation (A), Learning systems (A), Mentoring</td>
</tr>
<tr>
<td>• Differences: Supervisor support, Organizational support, Permission to fail, Understanding organization, LHD Impact</td>
</tr>
<tr>
<td>• Significant evidence of Organizational support</td>
</tr>
<tr>
<td>• Accreditation Policy encourages Permission to fail</td>
</tr>
</tbody>
</table>

| Similarities: Supervisor support (A), Learning systems, Mentoring, LHD impact (A) |
| Differences: Staff motivation, Permission to fail, Learning systems, Understanding organization |
| Evidence for Staff motivation and Mentoring more substantial |
| NO evidence of Organizational support |

TABLE IX. Summary of Organizational Cultural Themes Within Each LHD.

**Supervisor Support**

Supervisor support is defined as ways in which supervisors and executive level staff model, champion and support learning. The construct of supervisor support is demonstrated when senior-level managers take an active role in identifying the professional and/or leadership development needs of their staff – which was coded as ‘supervisor support’ in this dissertation analysis. During the analysis, an emergent code of ‘organizational support’ was identified that was prominent in the document analysis. Similar to ‘supervisor support,’ ‘organizational support’ relates to an overall organizational commitment to employee development. The supervisor support construct is also demonstrated through
ways in which supervisors and executive level staff motivate staff, which was subsequently coded as ‘staff motivation.’ And finally, ‘permission to fail’ is also an a priori code that was used to denote whether staff are allowed to make mistakes and/or can freely admit to them, as well as whether they incorporate lessons learned. These elements of supervisor support were prominent in the LHD interviews, and somewhat prominent in the documents analyzed in this dissertation research.

Supervisor support. Supervisor support was defined as senior-level managers taking an active role in identifying the professional and/or leadership development needs of their staff; it was evident in the LHD case documents vis-à-vis the description of supervisor-staff partnerships. LHD C’s workforce development plan included the following statement:

“Working with their supervisor, individual staff members will review the multiple assessments/evaluations results. Based on their joint review, the supervisor and employee will determine the amount and specific type of training(s) for the next employee review period.” [LHD C]

Along the same vein, LHD A’s workforce development plan affirmed the role of the supervisor-employee partnership: “It is the responsibility of the employee and management, working in partnership; to assure training goals and needs are met for each employee.” LHD C’s workforce development plan also cited an example of supervisors providing flexibility to staff. It cited the following: “employees know their job, create clear precise work objectives, and are allowed flexibility at how they arrive at their completion.” This example demonstrates that employees are supported in their work and, in being allowed flexibility and the opportunity to create their own objectives, have ownership and responsibility over the direction of their work.

LHD staff respondents supported the claims of supervisor support found in the documents. One LHD B staff member made the following statement regarding their agency director:
“Our local health department director... is a great mentor, always encouraging, and she models the way. She encourages staff to take on new opportunities – occasionally throws new projects to staff to complement professional growth, such as the reading program with local schools. [She] has implemented a book club for staff, and staff are encouraged to participate in group discussions during staff time...has offered opportunities to staff that have never had opportunities...has cultivated a culture of learning.” [LHD B]

According to an LHD A respondent, “Division managers work with their staff with regard to leadership skills in different capacities.” An LHD C interviewee stated that “learning opportunities are important to reignite interest. We encourage flexibility in work hours to accommodate learning opportunities and staff attending classes.” It is evident in each of the three LHD cases that the support received by staff from supervisors has resulted in greater trust and autonomy for the employee, which may indicate that the culture of learning that has been (is being) cultivated has resulted in a greater efficiency of work flow and processes.

Organizational support. Organizational support was an emergent code that was defined as overall organizational commitment to employee development. The document analysis revealed an organizational commitment to leadership and professional development for LHD staff which was identified as an emergent code. The LHD B’s QI plan stated an aim to “increase leadership potential/skills by increasing participation in educational opportunities,” as well as by “partnering with local health education campuses” and “researching community resources and education” so that “a strengthened employee sense of value and pride in the organization is achieved” and “job fulfillment performance is improved.” Additionally, the LHD’s workforce development plan mentioned that “team members are provided between one percent and five percent of work time in their job description for the purpose of workforce/professional development.” A similar level of commitment was seen in LHD A’s workforce development plan. The plan states that the LHD “fosters a culture of professional development that will enable its employees to acquire new skills and build a long-lasting and satisfying
career within the organization.” As indicated in the workforce development plan, some of the ways in which LHD A aims to uphold this culture of professional development is through the establishment of a training calendar and schedule for all staff, QI training for all staff, competencies and skills training for all staff, and leadership (change management) training for executive level staff. LHDs B and C also listed similar methods and strategies in their workforce development plans.

**Staff motivation.** Staff motivation was defined as ways in which supervisors and executive level staff motivate staff. While present in the analyzed documents, it was not mentioned frequently or substantively. LHD C’s workforce development plan addressed staff motivation in its description of its results-oriented work environment – a management strategy that focuses on employee performance rather than their physical presence. This strategy connects pay increases and merit payments to performance rather than length of service; because their work is results-oriented, staff are allowed to telecommute. LHD B’s strategic plan included a list of intentions aimed at increasing the number of staff who “experience a sense of pride being associated with [LHD].” This list included trainings/workshops, teambuilding activities, acknowledging staff as employees of the month, and having senior-level managers shadow employees. Employee recognition was also identified in LHD A’s quality improvement plan. The plan states, as a specific quality improvement activity, to “develop a public recognition program for employees engaging in superior QI efforts, and ensure that these efforts are mentioned in the Annual Report.”

Staff interviewees allege that having supervisor support in professional development – and giving employees flexibility – contributes to staff motivation. An LHD C staff interviewee affirmed that they “allow flex schedules to accommodate staff needs while maintaining that work is done. This has helped with staff feeling valued.” LHD B staff respondents indicated that staff are motivated when they are encouraged to “do their own research regarding their training needs – both professional and in content-specific areas.” In this way, staff are encouraged to identify training needs they are also
interested in. Additionally, respondents stated that this LHD offers bonuses based on the staff member’s evaluation – particularly if the staff person chose to participate in additional training and learning opportunities. Yet another way that an LHD case found to motivate staff was to host celebrations. LHD A interviewees indicate that their organization compiles staff accomplishments from the year and celebrates them with other staff at a year-end gathering.

There are challenges, however, that staff interviewees pointed out with regard to staff motivation. One LHD A respondent stated that this “is an area we can improve upon…we need to recognize our direct reports, but we also need to acknowledge all the employees.” Another interviewee from LHD B stated that recognition carried with it the unintended consequence of additional responsibility. These challenges underscore the balance between appreciating and motivating staff adequately without assigning additional – and perhaps inappropriate – work or responsibilities that may undermine their value to the LHD organization in the long term.

Permission to fail. Permission to fail was defined as whether staff are allowed to make mistakes and/or can freely admit to them, as well as whether they incorporate lessons learned. While the permission to fail element was not explicitly described in any of the LHD documents that were analyzed, it was briefly described by LHD B and C staff interviewees. LHD B staff interviewee stated that “staff are not to be held responsible if a QI project doesn’t succeed the first time around. [The Accreditation] Policy has an emphasis on trying again and adapting, giving staff permission to fail.” LHD C staff interviewees indicated that “staff are always looking for ways to improve,” which implies that staff from this LHD are given opportunities to identify areas of improvement and learn from them. It is important to note that since all three LHD cases describe the integration of quality improvement processes in their organizations, that this alone may assist in promoting an environment where employees are allowed to fail and experiment before arriving at a sustainable solution.
Supervisor support, like other factors discussed thus far, is multi-faceted. Various elements of this factor were evident in the three LHDs that were a part of this case study. Supervisor and executive level support for staff in learning was demonstrated by providing staff with time to participate in training and learning opportunities, as well as providing them with opportunities that interest and motivate them. Additionally, organizational support was an emergent element demonstrated by an organizational commitment to support the learning and leadership opportunities of employees. Staff motivation highlighted the importance of recognizing staff for their work, but also carried with it the challenges of acknowledging all staff and being careful not to undermine their value by giving them more work. Finally, due to implementation and integration of quality improvement processes in all three LHD cases, it can be implied that permission to fail is an element that is present in these organizations.

Knowledge-sharing Systems

Knowledge-sharing systems were a significant factor identified in both LHD documents and interviews. This factor encompasses two elements of the staff-supervisor relationship (or staff-staff relationships) that foster professional growth, such as mentoring, as well as learning systems that have been implemented within the LHD that enable learning to take place. These systems could include informal work groups, and/or more formal seminars, conferences and online learning platforms that are made available to staff. A priori codes were used to code these elements: ‘mentoring’ and ‘learning systems.’ These codes frequently co-occurred with codes that identified the supervisor support construct.

Learning systems. Learning systems was defined as learning systems that have been implemented within the LHD that enable learning to take place. These systems could include informal work groups, and/or more formal seminars, conferences and online learning platforms that are made available to staff. LHDs identified the various strengths in this area and identified them as catalysts to
achieve objectives in order to strengthen the learning and professional development of their workforce. For example, LHD A’s workforce development plan states that the LHD “must look at the ability to cross-train staff in programs, positions, and depth.” Components of this particular LHD’s culture – as stated in its plan – include giving employees and supervisors access to coaching, educational and training opportunities, on-the-job training, and quarterly lunch and learn sessions where staff have the opportunity to learn from one another, as well as outside speakers. In their workforce development plans, LHDs also recognize the importance of individual professional development plans for their employees. LHD B provides “between one percent and five percent of work time in their job description for the purpose of workforce/professional development.” And while it didn’t specify any details regarding type, LHD B indicated in its strategic plan that staff trainings are a strength, and also created an objective in its strategic plan to “increase the number of staff who are cross-trained.” Individual staff members from LHD C review their assessments and evaluations with their supervisor and determine the amount and specific type(s) of training for the next employee review period.

LHD B staff interviewees acknowledged its seasoned and experienced staff – which ties back to the objective in its strategic plan regarding increasing the amount of cross-trained staff, and possibly utilizing the experience of its veteran staff to conduct the cross-training. LHD B interviewees also stated that their agency hosts quarterly staff meetings where QI updates are shared and/or a specific QI tool is highlighted to prepare employees for participation in QI teams and enable them to incorporate QI techniques into their daily work. While participation in online trainings was also encouraged, both LHD B and C interviewees specifically stressed the importance of face-to-face networking with other LHD staff, because it allows staff to connect with peers, build relationships and encourages them to share experiences. As one LHD C respondent explained, “Face-to-face is more appealing to all of your senses versus sitting at a computer. Seeing people and reconnecting, and sharing experiences, situations, and ideas.”
The interviewees also highlighted that participation in these learning opportunities and the interactions that ensue, encourages staff to learn new ideas or resolutions to problems from their peers. All three LHDs also mentioned that they encourage their staff to attend – and also strive to budget for staff attendance to – offsite conferences and institutes as strategies that complement the learning systems that are implemented for their employees. As one LHD respondent stated:

“[The LHD] director supports attendance at conferences and trainings – anything that furthers knowledge in the current job class or furthers your professional development. If there’s something you want to do and funding is available, there is nothing to hold you back.” [LHD B]

The value that these opportunities provide LHD staff in their professional growth is evident in the work they do both internal and external to the LHD organization. One staff respondent from LHD C states that “Public health staff are seen as experts. Community partners value and trust them.” Another respondent from LHD B states that “working with other managers helps to augment the leadership aspect.”

Mentoring. Mentoring was defined as ways in which the staff-supervisor relationship (or staff-staff relationships) that foster professional growth, Another aspect of knowledge-sharing systems that was revealed was the implementation of mentoring relationships. ‘Mentoring’ also co-occurred frequently with the ‘learning systems’ code. This element was more commonly addressed in the staff interview responses, though briefly mentioned in terms of the LHD’s commitment to mentoring staff in the documents reviewed for all three LHD cases. LHD A stated:

“We must look at the ability to cross-train staff in programs, positions, and depth. [LHD] promotes the team concept and discourages staff from working in silos Staff is encouraged to train and gain knowledge in other areas within the organization.” [LHD A]

LHD B made reference to mentoring in its workforce development plan as well: “Whenever possible, [LHD] is committed to training and mentoring current staff for the purpose of leadership succession planning and to maintain organizational knowledge.” LHD C also stated its commitment in its
workforce development plan, declaring that it would “encourage identification of opportunities for training and mentorship, locally and statewide.”

LHD C interviewees mentioned that staff mentor each other informally; staff from all three LHDs stated that their staff mentor nursing and graduate level students that in turn also contribute to learning for the employee mentors. LHD B and C also cited that while informal mentoring currently occurs, both agencies are in the process of initiating a more formal mentoring program within their organization, where staff will be shadowing one another for the purpose of succession planning. According to LHD B, mentorships have allowed staff to see their strengths and allow them to focus on other goals; one interviewee stated:

“There’s lots of informal mentoring...Mentorships have allowed staff to see their strengths and allow them to focus on other goals...One of the best things is just having somebody to talk to...[mentoring] should not be underestimated – how important this is.” [LHD B]

Networking at conferences and offsite training opportunities is an element that all three LHDs shared with regard to knowledge-sharing systems. According to interviewees from all three LHDs, having dedicated time for participation in such opportunities afforded staff with the ability to further their learning. Additionally, mentorship was also identified as a salient element that was validated by LHD interviewees as critical to staff learning and professional development.

Connecting Organization to the Environment

Connecting the LHD organization to its environment was not a particularly prominent factor, but was nonetheless mentioned in both LHD documents and interviews. This factor is demonstrated by three components: understanding the LHD organization, community relationships, and LHD impact. Understanding the LHD organization is illustrated by the understanding exhibited by the LHD organization of how its goals relate to the external environment, and was identified using the a priori code ‘understanding organization.’ Community relationships are demonstrated through efforts made
within the LHD to maintain and sustain relationships with external organizations. During the analysis phase of this research, this code was not used because the researcher discovered that it overlapped with the ‘community collaborations’ code that was used in defining the teamwork factor – one of the group dynamic factors described earlier. Finally, LHD impact was identified using the *a priori* code ‘LHD impact, and is signified through capacity-building: how the work of the LHD with external partners has strengthened the LHD internally.

*Understanding organization.* Understanding organization was defined as the understanding exhibited by the LHD organization of how its goals relate to the external environment. This particular element was addressed in only two documents: LHD A and B’s strategic plans. LHD A identified several priority areas related to the linkages between its strategic plan and its community health improvement plan. These priority areas acknowledged the sharing of health resources, health data, and the promotion of collaboration with the community. In discussing its strategic priority on improving access to health information, LHD A’s strategic plan states:

> “*Although the community resource list objective has been fulfilled for the purposes of the CHIP, it became obvious that specific resources for our most vulnerable populations, the indigent population in particular, should be better coordinated for post-hospital/medical discharge…Simply coordinating better marketing of these services through the resource list will help fulfill this objective, while staying within the capacity of [LHD] and its partners.*”

*LHD A*

LHD B’s strategic plan referenced an internal assessment conducted within the LHD organization, where they asked themselves how their programs and services were performing. The plan outlined the multiple aspects of the organization that impacted their performance, including “branding efforts improving,” “school nursing expanding as an enhanced service,” and “clinic billing improvements.” These various aspects included community-facing services that were related to the goals of the LHD.

The LHD staff respondents from each LHD case all briefly mentioned concise examples that illustrated an understanding of the organization to its external environment. An LHD A staff’
interviewee stated “We always pull out our vision and mission to make sure projects are aligning with it…we wouldn’t get involved in a partnership if it didn’t align.” LHD B described that their organization meets quarterly with the Board of Health where challenges and needs are emphasized; additionally, the Board of Health can leverage partnerships on behalf of the LHD. An LHD C respondent shared that staff “have conversations about impact on community, how we can support one another…Building a network that is broader than the programs.”

*LHD Impact.* LHD impact relates to the LHD’s demonstration of building the capacity of the LHD to address complex health problems. This code co-occurred frequently with ‘understanding organization’ and ‘team participation.’ LHD impact is an element that was alluded to only in LHD B’s workforce development plan. With regard to assessing the competencies of its staff, this plan stated that “the greatest ability in the competency area was ‘Explain the ways public health, health care, and other organizations can work together or individually to impact the health of a community.’” While this quote does not demonstrate how the LHD enhanced its capacity to address health problems, it does show that its staff are able to explain their LHD’s relationship with its partners and how they work together as parts of a larger system.

All three LHD A staff respondents emphasized that the relationship-building efforts related to the accreditation process – e.g. inviting partners to be involved in the community assessment and health improvement planning – had resulted in community partnerships that have greatly benefited their organization. An LHD B interviewee stated:

> “Some partners ask – what can we do to help you. It’s important because it establishes a foundation for meeting and addressing mutual needs…this is a public health issue so what are you doing to address it? What can we do to help? Building relationships helps to discuss problems together to realize and pinpoint source of conflict/issue.” [LHD B]

The mutual benefits that the LHD cases appear to acquire have also led to other opportunities as well. A staff respondent from LHD C states “Partnerships have resulted in more grant and funding opportunities
and the fostering of additional relationships.” Another staff respondent from LHD C shared that “Schools, United Way, hospitals, YMCA – all working together on getting community healthier. If something else comes along – such as rampant flu or other PH matter – you already have the capacity to address.” Similarly, an interviewee from LHD A explained that they “have conversations about impact on community, how we can support one another. Building network that is broader than program.” These examples describe the common goals that LHD organizations and their community partners share, which evidently results in increased functioning and effectiveness attributed to these community partnerships.

Connecting the LHD organization to the environment is a factor that was not particularly revealed frequently in the documents, though evidence of this factor in the LHD organization was exposed in the LHD case interviews. The examples of the ‘understanding organization’ element described by staff respondents illuminated how staff understood the role of the LHD agency in the community with the alignment of goals with their partners. Additionally, the ‘LHD impact’ element highlighted how the expansion of community networks has impacted their learning in a way that has facilitated their approach to health issues.

Summary of Organizational Cultural Factors

Supervisor support and knowledge-sharing systems appear to be the most prominent organizational cultural factors among the LHD cases studied. While LHD impact was not a particularly notable construct in the documents analyzed, LHD staff interviewees were able to speak to how active it is in their respective organizations. Of note are the ‘organizational support,’ ‘staff motivation,’ ‘mentoring,’ and ‘understanding organization’ elements that were particularly evident in the LHD cases, and that demonstrate various aspects of how the organizational culture in each of these LHDs may be promoting learning and leadership development for the workforce.
Leadership Competencies

According to the literature, “leadership development is an essential element in the nation’s efforts to improve the public health infrastructure” (Saleh et al, 2004). Leadership development has also been found to foster improved decision-making within LHD organizations that teach leadership competencies to their staff and allow them to practice their newly obtained knowledge. The leadership competencies selected for analysis in this dissertation research include systems thinking, strategic communication, and change management.

Frequency & Summary of Themes

The table below displays a brief summary of the elements of each leadership factor for each LHD in this case study analysis.

<table>
<thead>
<tr>
<th>Systems Thinking</th>
<th>LHD A</th>
<th>LHD B</th>
<th>LHD C</th>
</tr>
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</table>
| **Strategic planning** | • Staff training is prioritized  
• Identify employees for succession plan  
• Programs assessed as part of continuous QI | • Staff training is prioritized: staff attend Leadership Institute  
• Staff participation in strategic planning process | • Staff training is prioritized: individual & Dept. wide training  
• LHD Core values linked to professional development priority |
| **Stakeholder feedback** | • Involvement of Board of Health  
• Internal & external stakeholders involved in goal setting & planning | • Internal stakeholders involved in strategic planning process | • External stakeholders involved in goal setting & planning |
### Strategic Communication

| Processes | • Area of improvement – staff need training | • Area of improvement – staff need training | • Networking meetings where communication encouraged | • Survey to partners identify communication areas for improvement |

| • In process of enhancing outward-facing communication methods | | | |

### Change Management

| Problem solving | • Performance management system has resulted in proactive approach | • Area of improvement | • Performance management system has resulted in more efficient problem solving | • Quarterly leadership meetings where problems discussed |

| • Staff participation in Leadership Institute has resulted in consideration of different approaches by staff | | | |

### Communication of vision

| • Link vision to capacity and scope of work | • Link vision to capacity and scope of work | • Link vision to capacity and scope of work |

### Comparison between LHD cases

| • Similarities: Stakeholder feedback, Problem solving (C), Communication of vision | • Similarities: Stakeholder feedback (A), Communication processes (A), Communication of vision | • Similarities: Stakeholder feedback (A), Problem solving (A), Communication of vision |

| • Differences: Strategic planning, Communication processes | • Differences: Strategic planning, Problem solving | • Differences: Strategic planning, Communication processes |

| • Both internal & external stakeholders referenced in goal setting & planning | • Participation of staff at Leadership Institute | • Core values linked to professional development |

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**TABLE X. Summary of Leadership Competency Themes Within Each LHD.**
The systems thinking construct is characterized by three elements: strategic planning, interdisciplinary collaboration, and stakeholder feedback. Strategic planning is further described as the extent to which an LHD adheres to and/or makes reference to its strategic plans and goals; interdisciplinary collaboration illustrates the collaboration with partners to streamline service delivery and maximize resources; and stakeholder feedback, which is depicted as the implementation of a feedback process by the LHD with its internal and external stakeholders. Strategic planning was coded as ‘strategic planning,’ and stakeholder feedback was coded as ‘stakeholder feedback.’ However, examples of the interdisciplinary collaboration element were found to be closely related to the community collaborations element under the teamwork construct, so it was subsequently eliminated.

**Strategic planning.** Strategic planning was defined as the extent to which an LHD adheres to and/or makes reference to its strategic plans and goals. It was a heavily referenced leadership competency element in the document review phase of this research: evidence of this element was cited in the workforce development plans of all three LHD cases, as well as in two strategic plans and two QI/performance management plans. The workforce development plans for both LHD B and C mention its goals of completing an annual training plan and objectives for the staff, along with updated training manuals. For example:

“The plan specifically includes goals for the completion of [LHD]’s annual training plan, increasing employee satisfaction with and understanding of the annual evaluation process, completing at least four QI projects, completing preparedness trainings and tests and updating training manuals.” [LHD B]

LHD C’s workforce development plan placed an emphasis on both individual and department-wide training with the following statement:
“[LHD] is committed to staff development given that they have multiple core competency assessments/evaluations in place. The benefit of having multiple assessments provides the employee and the department more depth in identifying its training needs.” [LHD C]

The plan also linked its goal of professional development to one of its core values: “With one of its stated core values being Caring and Competent Staff, the department is committed to professional competency through continuing education with application to client and community needs.” LHD A’s workforce development plan acknowledged goals of identifying high potential staff to take part of the LHD’s succession plan, as well as “establishing an environment that is conducive and supportive of learning. Identifies high potential employees as part of agency succession plan.”

Occurrences of strategic planning were also identified in the LHD case strategic and quality improvement/ performance management plans. LHD C’s performance management plan states the following:

“It is the goal of the [LHD] to develop and maintain a comprehensive performance management system that involves the ongoing use of performance standards and measures, reporting of progress, and quality improvement principles to ultimately have a positive impact on the public’s health in [local] County.” [LHD C]

LHD C’s plan also articulates a process in which programs and policies are reviewed in order to achieve greater effectiveness and efficiency within the organization. Relatedly, LHD A also mentions the importance of assessing their programs and incorporating continuous quality improvement:

“While all elements of our strategic plan speak to improving quality in our organization, developing a culture of continuous quality improvement is specifically addressed in Strategic Priority 4.C. These activities will also help us to meet the standards in Domain 9 (Evaluate and continuously improve health department processes, programs, and interventions) of the Public Health Accreditation Board’s (PHAB) Standards & Measures.” [LHD A]
Strategic planning was mentioned by staff respondents from LHD B and C; aside from the fact that their staff review the organization’s strategic plan every year, LHD A respondents did not mention any reference to strategic planning or strategic goals. LHD B staff reiterated their agency’s commitment to staff’s professional development as a critical goal: “We send several staff to [state] Population Health Leadership Institute – it’s included in the Strategic Plan.” Staff are also invited to participate in the agency’s strategic planning process, as their feedback regarding the LHD’s goals is regularly requested. LHD C staff respondents reiterated the importance of core competency trainings and the involvement of staff in its strategic planning process. In fact, one interviewee stated that “Strategic planning was done today with a SWOT analysis and we developed a draft of our strategic goals – all staff participated in the big picture.”

*Stakeholder feedback.* Stakeholder feedback was defined as the implementation of a feedback process by the LHD with its internal and external stakeholders. This element was identified in LHD B’s strategic plan, where there was significant mention of involving internal stakeholders in the strategic planning process, and conducting internal assessments, where stakeholders are asked how the LHD was performing. For example, “input was sought into [LHD]’s Mission, Vision and Values; and an internal stakeholder survey was completed along with group strategic planning questions.” Similarly, LHD A engages their board of health to identify areas of improvement for performance measures:

> “Updates on the designated performance measures will be reported to the...Board of Health (BOH) on a quarterly basis to allow for further direction from the governing entity, as well as to provide transparency to the community at large.” [LHD A]

Instances of stakeholder feedback were not mentioned frequently by LHD staff respondents. An LHD C interviewee did state that their organization solicited feedback from external stakeholders by partnering “with hospitals and other community health partners to set goals for each health priority” as part of their community health improvement process. LHD A respondents also shared that their
organization engages internal and external stakeholders in goal setting and planning. One respondent stated:

“[Engagement of stakeholders is] built into the CHIP and Strategic Planning process. Several managers are engaged with partners so when we sit down to write grants, we sit down together. We like to receive feedback – we may not always agree or be immediately receptive to it, but we like to receive it.” [LHD A]

This respondent also shared that because of their efforts in engaging partners, they have cultivated many personal and professional relationships.

As an element of the systems thinking construct, ‘strategic planning’ was prominent in the document review and interviews of LHD B and C in particular. This element illustrated the presence of systems thinking activities in these LHD cases. ‘Strategic planning’ was illustrated by the multiple mentions of staff training and professional development as strategic goals for the organization. While ‘stakeholder feedback’ was not identified as a significant element in the analysis of leadership competencies for each LHD case, LHD A and B did mention efforts to engage stakeholders in their plans, and LHD C interviewees described these efforts orally.

Strategic Communication

Strategic communication is described by the sharing of knowledge and information with external stakeholders. This is demonstrated when LHD and external stakeholders participate in a bidirectional process to share knowledge and learning opportunities – for example, co-sponsoring a training workshop for staff and community members. However, since there did not seem to be any explicit mentions of sharing of knowledge and learning opportunities in the case study analysis, the a priori code ‘knowledge sharing with stakeholders’ was not used. Strategic communication is also illustrated through communication processes, or ways in which the LHD and stakeholders share
priorities and objectives. The *a priori* code ‘communication processes’ was used to illustrate the strategic communication construct in this dissertation analysis.

**Communication processes.** Communication processes was defined as ways in which the LHD and stakeholders share priorities and objectives. LHD A’ workforce development plan mentioned that it needed to conduct a “Training to effectively communicate with clients, coworkers, and community partners.” A related statement was identified in LHD B’s workforce development plan, under a summary of a communication skills competency assessment of its staff:

“The greatest strength was concerning the question “Solicit input from individuals and organizations (e.g. chambers of commerce, religious organizations, schools, social service organizations, hospitals, government, community-based organizations, various populations served) to improve community health” and the greatest area for improvement is in regards to “Facilitate communication among individuals, groups, and organizations.” [LHD B]

With regard to the interviews, only LHDs A and C described evidence of this element in their LHD organization. LHD A staff respondents explained that their organization is “In process of revising the website to include a social media feed to allow partners to connect with our local health department and for us to connect to partners. We can have outward facing documents be more easily accessible.” While interviewees state that their organization fosters open communication, they acknowledge that its ability to communicate priorities and objectives with external stakeholders is an area for improvement. Similarly, LHD C conducts “networking meetings with school health staff to encourage bidirectional communication – needs and concerns in schools are addressed. We have also done a survey to determine if the LHD is addressing [school] needs and ways in which the collaboration can be improved.” The activities that LHD C has undertaken indicate an effort in initiating bidirectional communication with critical partners.
Strategic communication – defined as communication processes in this dissertation analysis – was not found to be a remarkable leadership construct in either the documents or LHD staff interviews. If anything, strategic communication remains an area for improvement for LHDs, or one that is not easily understood and implemented in the LHD organization.

Change Management

Change management is portrayed by the existence of two elements: problem-solving and communication of vision. The problem-solving element highlights the LHD’s ability to be open and support ideas that come from staff to solve problems. For example, senior level managers may encourage staff to share ideas to solve problems before they provide additional direction in how to address the problem. The communication of vision element relates to the development and communication of clear organizational vision. These elements were identified by the a priori codes ‘problem-solving’ and ‘communication of vision.’

Problem-solving. Problem-solving was defined as the LHD’s ability to be open and support ideas that come from staff to solve problems. Few examples of problem-solving were identified in the document review for each LHD case study. LHD C’s performance management plan states that its integration of a comprehensive performance management system has resulted in “More efficient and effective problem solving.” LHD A’s documents imply that the organization is moving in that direction; its strategic plan cites as a strength that its “staff have progressive ideas and are problem solvers.” This claim is further supported in its QI plan, which states:

“[LHD] has a history of conducting small-scale, unofficial quality improvement efforts to adjust to the ever-changing needs of the organization and its community. Most of these efforts were reactive to process glitches or to unmet customer needs. Others were based on meeting the needs of grant deliverables.” [LHD A]
LHD A’s QI plan also describes that the development and implementation of its plan will ensure that “the performance management system is working to proactively improve the functions of the organization, rather than continuing the reactive efforts of the past.”

Contrary to the aforementioned examples, problem-solving was acknowledged in LHD B’s workforce development plan as an area of improvement that was identified in a staff assessment: “the largest opportunity for improvement was concerning the ability to “Modify organizational practices in consideration of changes (e.g. social, political, economic, scientific).” This statement implies that problem-solving is a challenge for this particular LHD at an organizational level.

Staff respondents from all three LHD cases mentioned examples of problem-solving in their organization. LHD C staff interviewees stated that their organization conducts “Quarterly leadership meetings where we talk about how to work with staff and handle difficult situations.” The LHD also encourages staff to work through problems with their peers and supervisors. As one interviewee stated:

“Staff are treated as subject matter experts – everyone has a specialty…you have to in public health, there’s just too much to know and there’s no way [Health Officer and Public Health Supervisor] can know all that.” [LHD C]

LHD B elaborated on how their staff’s participation in the statewide public health leadership institute has enhanced their staff’s problem-solving abilities in such a way that staff “learn how to approach things differently and learn tactics around difficult conversations, hold meetings, portray data, etc.”

LHD A staff state that their organization strives to use new situations as teaching moments for staff:

“If staff see a problem, staff are encouraged to identify solutions. A culture that we have that staff are welcome to identify ideas and share them with management. staff are encouraged to consider problems with a different perspective…so that they can consider other root causes of a problem.” [LHD A]
Communication of vision. Communication of vision was defined as the development and communication of clear organizational vision. There was some evidence of the communication of vision element in the documents reviewed. All three LHD strategic plans mentioned that staff were involved in the vision-setting process, and also cited that their organizational vision was linked to their goals and scope of work. LHD B’s strategic plan described their process as follows:

“In groups staff completed a “Headline News Activity” and were asked what the headlines would say if [LHD] were to receive media coverage 5 years from now... The information obtained from this exercise was compiled by the Steering Committee and draft vision statements were presented back to all staff at the...all staff meeting where further revisions were made during discussion before a nominal group technique was conducted.” [LHD B]

Staff involvement assures staff support for the LHD’s organizational directions and priorities. LHD A linked their organizational vision to their quality improvement approach in the following statement from their QI plan:

“QI activities directly correlate with the [LHD] Vision and Mission statements through the shared desire to provide the best possible services to the community within the [LHD] organizational capacity and scope of work. In order to achieve the vision of being a leading public health services provider in the region, [LHD] must continuously improve programs, supportive services, marketing, and staff development.” [LHD A]

Additionally, the organizational vision for each LHD case was clearly stated in the strategic plans and QI plans at a minimum.

In the LHD staff interviews, communication of vision was not an element that was described by staff respondents from any of the LHD cases. This indicates that the development or communication of the LHD vision may not be an element that is necessarily prominent or rises to the surface for LHD staff.

This dissertation analysis focused on two elements of the change management factor. Evidence of ‘problem-solving’ was exemplified through QI approaches in addressing health issues and discussions at meetings with various subject matter experts. These approaches were accompanied by
both encouraging and challenging staff to take lead roles in solving problems and considering other perspectives. The communication of vision element is closely tied to the vision-setting element of the ‘empowerment toward a collective vision’ factor. It was only briefly cited in the strategic plans of each LHD case and not at all cited by the LHD staff interviewees.

The three leadership competencies – systems thinking, strategic communication, and change management – selected for study in this dissertation research are broad and complex. Nonetheless, the elements selected to represent the systems thinking and change management leadership competencies were evident in all three LHD cases. Strategic communication was not a prominent competency and was, in fact, identified as an area of improvement by LHDs A and B.
V. DISCUSSION

Previous chapters in this dissertation have described how a focus on discipline-specific competency-based training in LHDs has resulted in a technical training culture that does not foster the development of leadership competencies. Also described are the group dynamic and the organizational cultural factors that have contributed to the implementation of cultures of learning in other non-public health sectors. These cultures of learning have subsequently resulted in building and sustaining effective leadership skill development for their respective workforce (Puccio et al., 2007; Bersin & Associates, 2010; Grima et al., 2014). For LHDs to support and promote leadership development that results in a well-skilled workforce, they will need to integrate elements of these group dynamic and organizational structural factors that have been identified as critical to defining a culture of learning.

This research focused on examining how group dynamic and organizational cultural factors contribute to a culture of learning; it also examined the extent to which a culture of learning may facilitate leadership development for the public health workforce in LHDs. While some factors were found to be more active than others, the results of this research – as presented in Chapter 4 – indicate that the presence of these factors in the LHD organization do contribute to promoting a culture of learning and leadership development for the LHD staff. However, the external trainings and training elements provided by regional PHTCs do not appear to play a critical role in supporting a culture of learning in LHDs. These findings will be further elaborated upon in this chapter.
Research Question #1: Group Dynamic and Organizational Cultural Factors

*How can group dynamic and organizational structural factors support a culture of learning in local health departments?*

*Group Dynamic Factors*

According to the data collected from the quantitative survey, group dynamic factors are evident in the accredited LHDs that completed the survey. The ANOVA analysis results indicate that there is no difference in the perceived contribution of these factors. Thus, this implies that there is no one factor that is perceived to ‘stand out’ in relation to other group dynamic factors with regard to the extent they foster a culture of learning. While the ANOVA analysis suggests that each of the group dynamic factors are equally present and active in the LHDs that completed the quantitative survey, the case study analysis of the subset of LHD cases revealed that some of the elements that defined the group dynamic factors were either missing or less evident in these LHDs. This implies that there may be areas for the LHDs to improve upon, or areas where some elements of group dynamic factors are active in varying and unbalanced levels.

In the case study analysis, all three LHDs demonstrated evidence of group dynamic factors being active within their organization. With regard to *inquiry & dialogue*, all three LHDs mentioned multidisciplinary approaches to addressing health problems, and participation of staff on multidisciplinary teams. Through face-to-face interactions, these examples foster exposure to the sharing of multifaceted perspectives between LHD staff and partners and stakeholders. Of note, staff in LHDs B and C participate in community coalitions and committees; LHD C staff respondents also indicated that in-person trainings contributed to their exposure to new perspectives because they are able to share ideas and experiences with other health professionals. All three LHDs described that staff input is actively solicited, particularly in the development of accreditation planning documents. In fact, the accreditation process was cited by staff from all three LHD cases as helping to foster inquiry and
dialogue because a collective group of LHD staff came together to review organizational processes and document evidence that demonstrate whether the LHD meets certain performance measures and standards. In reviewing these processes and documents, staff questioned existing protocols, developed innovative strategies, and were ultimately able to identify changes and improvements that needed to be implemented through these discussions. The involvement of community partners also enabled the LHD to create a collective effort toward improving the health of their community. These collective efforts subsequently helped to create a culture of continuous quality improvement – which the LHD cases found to be valuable.

However, the LHDs in this case study did cite such limitations as staff feedback not being explicitly invited, or issues of trust that may arise in sharing ideas and perspectives with others. Additionally, this factor was not one of the more prominent factors in the LHD quantitative survey. Nonetheless, the elements of inquiry and dialogue that were described may contribute to an LHD work environment where learning progresses through the sharing of ideas.

With regard to the teamwork group dynamic factor, the LHD case study analysis again showed similarities between all three LHDs. LHDs A, B, and C indicated that teamwork elements are active vis-à-vis their staff involvement and engagement in committees and councils at which community partners are also present. LHD staff at each of these three organizations also participate on performance management teams, as well as other groups and committees internal to their organization. This highlights that the LHD staff have been trained in QI methods and tools, so that they may integrate them in their daily work and have the knowledge and ability to participate in QI workgroups. These examples indicate that the accreditation process that each LHD case has undergone may have been a strong driving force that has subsequently supported the development of a team dynamic in each LHD.
The teamwork factor was one that co-occurred with staff motivation. LHD A interviewees provided various examples of teamwork: QI projects, CHIP process, and a pilot Community Health Worker program developed for the state. All of these examples included staff and community member input. One interviewee described that collaboration and participation in teams led to staff peer relationships developing and strengthening their ability to address - or at least cope with - complex issues. This strengthening of relationships and abilities fed staff motivation to carry out quality work. Teamwork also co-occurred with inquiry & dialogue. In LHD B, all three interviewees spoke about the LHD’s strong MAPP (Mobilizing for Action thru Planning & Partnerships) process – strong because the LHD incorporated participation of teams from both the LHD and external partner agencies.

The empowerment toward a collective vision factor was also evident in the LHD case study analysis. The LHD case studies exhibited some differences between the examples that highlighted the presence of this construct in their organization. Shared decision-making was evident in unique ways among the three LHDs: LHD A cited the involvement of staff in internal planning workgroups; LHD B described their policy review committees as exemplary of this element; and LHD C stated that shared decision-making was present in its monthly staff meetings and in the supervisor-employee partnership of identifying work objectives beyond their normal job duties. These differences could be attributed to the other factors that distinguish the LHD cases from one another – community setting, programs, etc. With regard to vision-setting, only LHD A provided any overt evidence of this element. The uniqueness of the examples provided by each LHD for the empowerment toward a collective vision construct may be attributed to the uniqueness of each case’s staff makeup – such as diversity of line staff, managerial staff, and higher-level executive staff – and the impact that other factors – e.g. community setting, political climate – may have on how active these elements are in the organization.

Instances of reflection were slightly different between each LHD in the case study analysis. Only LHDs B and C indicated that their staff are encouraged to challenge their mental models, and
provided examples of when staff were challenged to overcome their mental models in order to implement solutions to complex health problems. Both LHDs also encouraged staff to reflect on the deeper meaning of their work. The reflection construct in the literature emphasizes the exploration of “big picture” implications; LHD B and C displayed evidence that supports this exploration.

The quantitative survey results and the LHD case study both demonstrate that group dynamic factors are present and active in accredited LHDs. While the ANOVA analysis revealed that no one group dynamic factor is more present and active in LHDs, the examples provided by the LHD cases illustrate that these factors are present and active in varying levels and can be illustrated in various ways. While it appears that LHDs B and C have more substantive evidence of some group dynamic factors, such as reflection, this may be attributed to the length of time these LHDs have been accredited. Nonetheless, the variability in the examples of how each factor is evidenced in each of the LHD cases implies that there are various ways in which learning can be fostered at a group level within LHD organizations.

Organizational Cultural Factors

The quantitative survey data confirm that organizational cultural factors – supervisor support, knowledge-sharing systems, and connection of the organization to the environment – are evident in the accredited LHDs that completed the survey. Again, the ANOVA analysis results indicate that there is no difference in the perceived contribution of these factors.

In the case study analysis, all three LHDs demonstrated evidence of organizational cultural factors being active within their organization. The presence of supervisor support was found in different ways among each LHD case. There were three similarities found for this construct between the cases: LHD A and C were similar in how supervisors and employees jointly review training...
opportunities for the employee; LHD A and B both recognize employees as a way to motivate staff; and LHD B and C both permit failure and encourage staff to look for ways to improve. Of note was LHD B’s demonstration of organizational support for learning through their partnerships with local academic institutions and their commitment to research educational opportunities in the community for staff to participate and engage in. Additionally, this LHD also indicated that staff are allowed dedicated time in their work day for professional development. LHD C described significant evidence of this construct with regard to how staff are motivated: its Results-Oriented Work Environment strategy emphasizes employee performance over physical presence, and ties in to the flexibility of work schedules that employees are permitted. While all three LHD cases exhibited instances of how supervisor support promotes learning in their organization, LHD B and C presented innovative approaches that further support staff in their learning endeavors, and may additionally contribute to strengthened supervisor-employee relationships.

With regard to the knowledge-sharing systems factor in the case study analysis, there were both similarities and differences found among the LHD cases. LHD A and B appear to exhibit more data that support the existence of this construct in each of these organizations – each LHD case indicated that cross-training of staff and quarterly sessions or meetings enable their workforce to engage in learning. All three LHD cases also allow staff to attend offsite conference and institutes. As Ye et al indicate, “good leadership creates a supportive work climate, inspires and motivates employees and facilitates implementation of programs and activities” (2015). However, when the occurrence of mentoring was explored for each case, it is important to note that LHD C appears to present more evidence as compared to LHDs A and B. While all three LHDs provide mentoring to nursing and graduate level student interns, LHD C staff are also provided with a work environment that fosters informal mentoring and plans to implement a more formal mentoring program. Mentoring is a key element of knowledge-sharing systems, because, as the literature indicates, a mentoring relationship is critical because mentors
often provide the professional support that inexperienced young professionals often need, while obtaining the benefit of sharpening their own professional skills (Mahayosnand, 1999). As mentioned previously, having organizational support for learning enables the workforce to pursue career goals in addition to leadership development, which may positively impact the capacity of the workforce to deliver high quality services to the community (Callender et al, 2006).

Both supervisor support and knowledge sharing systems were commonly co-occurring themes. In describing the trainings that staff attend within LHD B, all three interviewees described participating in a statewide leadership institute. They also stated that staff participation in this institute is prioritized. LHD leadership supports the attendance of staff at this institute – one interviewee stated that the need for professional growth and development is recognized. Additionally, the following quote highlights the executive level support for staff that is demonstrated in the LHD:

“LHD Director has challenged staff to break mental models. She is a great mentor, always encouraging, models the way. Encourages staff to take on new opportunities – occasionally throws new projects to staff to complement professional growth, such as reading program with local schools. Has implemented book club for staff – staff encouraged to participate in group discussions during staff time. Has offered opportunities to staff that have never had opportunities. Has cultivated culture of learning.”

This quote highlights the influence that the LHD director has on the agency and the significance of having an agency leader that demonstrates genuine support of the staff and who prioritizes learning by providing staff with engaging opportunities. Similarly, in LHD C, all interviewees stated there is much supervisor support that exists with respect to staff participation in trainings, though funding has decreased, organization seems committed to continue to support.

In analyzing the connection of the organization to the environment factor in the case study, a greater level of variability was apparent between the LHD cases. One of the aspects of this construct is the organization’s ability to LHD A exhibited an ability to draw linkages between its Strategic Plan and its Community Health Improvement Plan – these linkages were explicit in the LHD’s Strategic Plan.
Both of these plans are prerequisite documents for LHD accreditation; it is possible that the understanding of how the LHD relates to its environment and its community partners may be nonexistent without the LHD having undergone the process of accreditation. As described previously, the accreditation process is a holistic and collective process that involves community partners. If the overarching goal is to improve the health of the community, the LHD cannot function in a silo. The LHDs in this case study described collaboration with partners so that goals and objectives are achieved collectively. LHD staff have participated in community coalitions and committees to help drive their efforts forward. Furthermore, as they work together, LHD staff and their partners have been able to continuously assess their strategies to determine how they can be improved. Additionally, LHD B and C mentioned an enhanced community network of partners whose goals aligned with those of the LHDs.

With regard to how the LHD builds capacity, all three LHDs referenced that the relationship-building they have done with community partners is largely a result of the accreditation process. Furthermore, LHD B explicitly indicated that staff are able to explain how their relationship with community partners denotes parts of a larger system. The examples provided under this construct illustrate that the accreditation process has made a significant impact in how strongly this construct is present and active in these LHD cases.

The quantitative survey results and the LHD case study both demonstrate that organizational cultural factors are present and active in accredited LHDs. While the ANOVA analysis revealed that no one organizational cultural factor is more present and active in LHDs, the examples provided by the LHD cases illustrate that these factors are benefiting the LHD cases and are thereby promoting a culture of learning for their staff. Of note, LHD B and C presented innovative approaches that further support staff in their learning endeavors; all three LHDs promoted mentoring but LHD C provided a work environment that fosters informal mentoring and plans to implement a more formal mentoring program; and the accreditation process and related accreditation activities appears to have facilitated the
integration of the connection of organization factor for LHDs B and C. The presence of all three of these organizational cultural factors in the LHD cases appears to further promote a culture of learning.

Other Factors

The LHD key informants revealed other factors that may contribute to inhibiting a culture of learning in local health departments. Funding was a factor that was mentioned by staff from the three LHD cases as an inhibitor to creating a culture of learning. Staff stated that a lack of funding prevented staff from participating in trainings or other learning opportunities. Even when funding is available, it is limited, allowing staff to attend regional or in-state conferences or workshops instead of national conferences. Another factor that was presented as an inhibitor was the bureaucracy that pervades LHD organizations. The process of obtaining approval for staff to attend a learning or training opportunity is often a complex multi-step endeavor that requires Board of Supervisor or other governing body approval; this discourages staff from submitting a training request. A third factor identified by LHD case interviewees was time. All three LHD cases cited that their lean workforce is such that several staff have multiple roles and responsibilities that leave them little to no time for participating in learning opportunities that are not already built-in to their day-to-day work. This suggests that innovative approaches to incorporate learning for the LHD workforce, in order to foster professional and personal growth, may be important to consider in order to develop a culture of learning.

Research Question #2: Leadership Competencies

How does a culture of learning enhance elements of leadership development – specifically systems thinking, change management, and strategic communication – in accredited local health departments?
In the case study analysis, the leadership competencies analyzed include systems thinking, strategic communication, and change management. With regard to *systems thinking*, the LHD cases demonstrate evidence that this competency is active within the organization through the strategic planning and stakeholder feedback elements. All three LHD cases noted that staff training (as described under the *knowledge-sharing systems* factor) is a prioritized goal identified in their strategic planning that is supported by activities and initiatives that enable staff to take advantage of training and learning opportunities. For example, LHD B encourages all staff to attend a statewide leadership institute, and LHD C provides individual and department-wide training. Furthermore, in analyzing the systems thinking competency for this dissertation research, elements of how the LHD obtains feedback from stakeholders was also explored. All three LHDs exhibited evidence of obtaining either internal or external stakeholder input – or both, as with LHD A – as part of their goal setting and planning activities. These efforts indicate that there are aspects of systems thinking that are active in these three LHD cases.

Engaging external partners and partaking in interdisciplinary collaboration is a facet of systems thinking. These facets were found to co-occur with the *inquiry and dialogue* factor. Of note, interviewees from LHD A stated that the process of accreditation – specifically, the development of the CHA and CHIP – brought community partners to the table. While the issues that were discussed were complex in nature, the approaches were creative. Conversations about these issues provoked in-depth examination and reflection that resulted in consideration and appreciation of multiple perspectives. Additionally, the development of these foundational documents helped to lay the groundwork for the LHD in developing critical relationships with partner agencies that have helped to streamline service delivery in the community.

Another example of co-occurrence of *systems thinking* and *inquiry and dialogue* was found in LHD C. One interviewee from this organization stated, “Accreditation really forces you to consider
quality of work – that has helped staff to look for different and/or better approaches and not be stuck in old ways.” LHD C interviewees confirm that as the LHD progresses toward its strategic plan and goals, most staff tend to be proactive – as well as experimental – in identifying solutions to problems. It is possible that the accreditation process has helped to bridge together key factors that enable the public health workforce to ‘learn by doing.’ These examples highlight the inquiry and dialogue factor as critical in further developing strategic thinking competencies for the workforce.

Strategic communication was the second leadership competency analyzed in this dissertation research. While all three LHD cases identified an aspect of this competency – communication processes – as an area for further growth and improvement, LHD C was the only case that exhibited evidence of this competency being actively integrated into the LHD’s work. The two main examples of this evidence include networking meetings with partners and regular surveying of partners to identify communication gaps. These two examples may be attributed to the community networks and relationships (as evidenced in the teamwork and connection of organization to environment discussion), and multidisciplinary nature of its teams (inquiry & dialogue) which have aided in enhancing this leadership competency for this particular LHD.

The third leadership competency analyzed in this research was change management. Two aspects of change management were explored for each LHD case: problem-solving and communication of vision. The results indicate that the performance management systems created by both LHD A and C enabled the LHD staff to more proactively approach problem-solving, or more efficient problem-solving. Of note, LHD B attributed their staff’s ability to consider different approaches to problems as a result of staff’s participation in their statewide Leadership Institute. In other words, staff’s capacity to address organizational change may be attributed to the learning systems (knowledge-sharing systems) that this LHD has implemented. Also of note, is LHD C’s mention of quarterly leadership meetings where problems are discussed. The content of these leadership meetings may be a result of the team
participation (teamwork) and shared decision-making (empowerment toward a collective vision) elements that may have enhanced this LHD’s abilities in this area. The communication of vision element was demonstrated by all three LHD cases through their ability to link their organizational vision to their capacity and scope of work. This may be attributed to the extensive planning and collaborative work that these cases have undergone as a result of the accreditation process.

Leadership competencies were also analyzed from the mixed methods survey completed by the PHTC coordinators in the first phase of this dissertation research. The results of the survey indicate that the PHTCs offer leadership trainings – defined as trainings that enable individuals to develop skills, abilities & behaviors that promote individual and organizational growth – to LHDs in the region they serve. As mentioned previously, the top three training topic areas offered by PHTCs include working with diverse populations, collaborative relationships, and change management. Less popular leadership training topics include group problem solving, followed by trainings in vision and mission development. The top three training topics do not readily appear to coincide with the competencies demonstrated by the LHD cases. Nonetheless, the LHD cases frequently cited the presence and, to an extent, strength of their collaborations with community partners, which illustrates evidence of change management skills and capacity.

Research Question #3: External Trainings

What external trainings and training elements have been most supportive in fostering a culture of learning that promotes leadership development for local health departments?

According to the results of the mixed methods web-based PHTC survey, there appears to be an equal mix of both frontline and senior-level staff that attend the trainings offered by the regional PHTCs. Most of the trainings offered are web-based, which suggest that providing trainings that are both accessible and available to LHD staff is a priority. In fact, according to the results, all of the
regional PHTCs surveyed stated that training needs are identified through a needs assessment; eight of the nine PHTC respondents indicated that LHD staff input is solicited (vis-à-vis an advisory committee or alternate method) to identify these needs. These findings imply that PHTCs value the input of LHDs within their regions and strive to provide continuing education and learning opportunities to enhance the professional development of public health professionals.

It was expected that the LHD staff respondents would validate the findings from the PHTC survey. Even though none of the respondents from the case study interviews mentioned that their staff had attended PHTC-hosted or sponsored trainings, staff interviewees did mention a variety of other learning and training opportunities that they attend and participate in. The lack of mention of attendance to PHTC-sponsored trainings may be attributed to a variety of reasons, such as interest, competing work or training opportunities, staff time, etc. The other external training opportunities that were mentioned by the LHD case interviewees included, but may not be limited to, statewide leadership institutes and conferences. Staff from all LHD cases stated that they found the networking and sharing that occurred at these institutes and conferences to be valuably enriching. In particular, LHD B interviewees spoke highly about their experiences at a statewide leadership institute that all LHD staff are encouraged to attend (this institute is supported by the NNPHI – the same umbrella organization that regional PHTCs pertain to). Thus, it can be concluded that the culture of learning extends beyond the walls of the LHD agency, and is a dynamic element that needs to be nurtured if public health staff are to benefit.

**Revised Conceptual Model**

The conceptual model shown in Figure 8 illustrates the factors that support a culture of learning, as well as the various components involved in a culture of learning may drive leadership development in an LHD as informed by this dissertation research. Accreditation appears at the top as the driving
force behind factors that contribute to a culture of learning – this is a new element added to the
conceptual model based on the findings of this dissertation research. In addition to the group dynamic
and organizational cultural factors that contribute to a culture of learning, there are also learning and
training opportunities external to the LHD. PHTCs are one such external contributor that were
examined in this study, though there are other contributors external to the LHD that were beyond the
scope and capacity of this research.

As the literature indicates, after information is made available to an individual, and subsequently
understood, behavioral change emerges through the practice of disciplines (Senge, 1990; Skerlavaj et al,
2007) – disciplines that have been previously described as group dynamic and organizational cultural
factors. This research has shown that group dynamic factors and organizational structural factors are
active in LHD organizations, and have become integrated into the organization’s operations and
environment in a way that has led to the sharing of information throughout the LHD organization, and
has also led to the questioning of norms and challenging assumptions. Thus, organizational learning
has been added as the next phase of learning in this conceptual model – this is also a new element added
to the conceptual model based on the findings of this dissertation research. Factors that impact the
acquisition of learning and the interpretation of learning – the first two phases as illustrated in the
Skerlavaj model – were not be examined as part of this dissertation research.

Evidence and implementation of such factors may create an environment, and thereby facilitate
the development of leadership skills or competencies – whereas this dissertation research focused
specifically on the competencies of change management, systems thinking, and strategic
communication – there are other leadership competencies that the LHD workforce can subsequently
develop as a consequence of regularly practicing and participating in activities that further their learning
and professional development.
As outlined in the conceptual model, leadership development as demonstrated by the LHD workforce may be manifested in various ways. Change management competencies are expressed through improved relationships with stakeholders (Umble et al, 2005; Skerlavaj et al, 2007; Kaufman et al, 2014). Strategic communication competencies are seen in the ways in which information is shared, both within and outside the LHD organization. (Kreitner et al, 2003; Kaufman et al, 2014). Systems thinking is critical in addressing complex public health challenges (Kreitner et al, 2003; Saleh et al, 2004; Lachance & Oxendine, 2015). Evidence of this competency includes networking, sharing of information, taking action and making decisions, listening, and working collaboratively in groups (Day, 2001; McCallum & O’Connell, 2009). Additionally, there may be other activities revealed in the research that may indicate evidence of leadership development occurring among the LHD workforce. These high-level leadership abilities may then further strengthen and sustain the factors that actively contribute to a culture of learning within the LHD, as well as lead to effective public health action by the LHD workforce.
Figure 8. Conceptual model
**Strengths & Limitations**

There are both strengths and limitations to the study design approaches used in this dissertation research. Since accredited LHDs are expected to have at least minimally addressed learning and/or leadership development for their workforce, the study’s focus on accredited LHDs enabled the researcher to obtain information about the external training and the internal culture of learning and leadership development environment. This information has yielded findings that have contributed to a greater understanding of what culture of learning factors impact leadership development. However, accredited LHDs are only a subset of LHDs across the nation, and LHDs vary greatly in size and jurisdiction served, as well as in other ways – i.e. governance structure – that may impact the organizational culture. Despite the focus on accredited LHDs, it can be argued that the use of multiple sampling techniques and multiple data sources added to the “richness” of the data. Yet these techniques and sources carried with them some limitations as well.

**PHTC Survey**

PHTCs were selected for this dissertation research because they provide a base of external support for LHD learning environments. The NNPHI readily agreed to assist the researcher with distributing the web-based survey link to the coordinators of all ten regional PHTCs. However, it is important to note that academic institutions and other agencies may also provide external training and learning support to the LHD workforce. Additionally, it is important to keep in mind that there are various external factors that may impact a culture of learning in an organization, including but not limited to, fiscal support for leadership training and development, power and influence from executive-level management or policy makers, and competing priorities for the LHD (Harper et al, 2015; Pourshaban et al, 2015).
Accredited LHDs were recruited with the support of the Program Improvement branch staff at the National Association of City and County Health Officials (NACCHO). These staff agreed to post the web-based survey link in their Accreditation Coordinator Learning Community (ACLC) newsletter. The ACLC consists of accreditation coordinators from LHDs that have either submitted an application to e-PHAB and are preparing documentation for initial accreditation, or are currently accredited health departments. Because the sampling approach used in this study focused on LHDs that received accreditation on or prior to January 1, 2017, this study may not have provided the full range of perspectives and experiences of all LHDs. Nonetheless, because accredited LHDs are required to undergo strategic planning prior to receiving accreditation, as well as undergo efforts related to workforce development for their organization, an emphasis on accredited LHDs provided evidence of how a culture of learning promotes leadership development for its workforce.

As indicated previously, there are a total of 141 accredited LHDs that received accreditation status on or before January 1, 2017. Only 24 responded to the quantitative survey – a 17% response rate. The low response rate may be attributed to lackluster promotion by NAACHO staff to their ACLC. To gain participation of LHDs, the researcher emailed and/or called accredited LHDs directly by locating their contact information from their respective LHD website.

Document Review

Specific documents reviewed for this dissertation research include the LHD workforce development plan, strategic plan, and performance management/quality improvement plan. These documents were selected because they are capstone documents that are required for submission to PHAB. Additionally, they served as critical documents that provided evidence of the culture of learning factors that were active in the LHD cases; they were also easily accessible from each of the LHD case
websites. Of note however, is that the documents reviewed for this study did not often reveal significant
details about the elements of the culture of learning factors being studied. For example, the plans
sometimes briefly listed evidence for the teamwork factor as “quarterly meetings conducted” or “lack of
trust/willingness to participate.” Any clarifying details needed to be probed during the staff interviews.

Additional documents such as the LHD annual accreditation report, additional supporting
documentation submitted as evidence for PHAB accreditation, and human resource policies and/or
personnel protocols that relate to workforce training and/or professional development may likely have
provided supplementary support for how culture of learning factors promote or inhibit leadership
development for the LHD workforce.

*LHD Staff Interviews*

Regional PHTC coordinators were not involved in the identification of case sites. Emails were
sent out to survey respondents of LHDs that met the selection criteria, inviting them to participate in
case study interviews. Additionally, several LHD staff reached out to the researcher directly after
completing the web-based quantitative survey on behalf of their LHD. These LHDs were then invited to
participate in the case study. If staff agreed, they were sent an informed consent form, and asked to
identify other staff within their LHD who would be willing and able to participate in the semi-structured
interviews. While this purposeful sampling approach may have yielded a biased sample of staff
respondents, the responses often validated the evidence found in the document review and enabled the
researcher to investigate a contemporary phenomenon in depth and within its real-world context (Yin
2014).

The selection criteria for inclusion in the case study is also a strength of this dissertation
research. The LHD case sites are “typical” suburban mid-size LHDs as outlined in the NACCHO
survey: fewer than 100 FTE staff, and serve a population of 50,000 - 100,000. As the research has
shown, even in mid-size LHDs, the factors that define a culture of learning are present and active, which implies that the adoption and implementation of these factors does not require excessive effort and staffing resources.

While this dissertation research focused on the group dynamic and organizational structural factors that may contribute to a culture of leadership development, there are actually numerous factors and elements that may contribute to supporting such a culture. These elements include funding, political environment, and formal trainings, which were mentioned by the LHD case interviewees. The extent to which these, and other, elements play a pivotal role or interact with these elements is beyond the scope of this research and an area for future study.

**Transferability/Generalizability**

The sampling methodology – as in the case study approach – used in this study does not lend itself to generalizability. However, as more LHDs apply for and initiate the accreditation process, it is possible that some of the research findings and relevant learnings may extend/transfer to not only LHDs that are similar to the LHDs sampled in this study, i.e. other accredited LHDs, but other non-accredited LHDs who are considering initiating the accreditation process. In other words, these non-accredited LHDs may find that implementing some of the activities and ways in which these factors are manifested in the LHD cases of this dissertation research, it may assist them in propelling them toward establishing a culture of learning in their organization. Additionally, other LHDs may find opportunity in developing innovative strategies that address some of the gaps revealed by the LHD cases. Finally, the findings of this study may further future research that explores the factors that contribute to a culture of learning and leadership development more in depth.
Leadership Implications for LHDs

This dissertation research illustrates that the factors that contribute to a culture of learning are indeed present and active in accredited local health departments. External training and learning opportunities – in the form of offsite conferences, leadership institutes, or collaborative community initiatives, as described in the findings of this dissertation research – have also been shown to play a critical role in nurturing the learning experience for public health professionals because they provide critical face-to-face communication and occasions for group learning. This research has also identified variabilities in how the culture of learning factors are represented in LHDs, as well as some weaknesses/imperfections where a strengthening of particular factors may further benefit the LHD workforce. This research has also shed light on other implications of leadership development for the public health workforce. Firstly, the value that is subsequently placed on learning varies from LHD to LHD, and may uniquely impact the learning and leadership trajectory of an individual staff person. Secondly, the findings highlight an opportunity for recommendations for LHDs and PHTCs in developing training around the group dynamic and organizational structural factors that were examined in this dissertation research. Finally, accreditation as an adaptive challenge may be the driving force behind establishing and/or sustaining a culture of learning for LHDs. These implications will be subsequently discussed in greater detail.

The Value of Learning

The Institute of Medicine’s landmark report, *The Future of the Public's Health in the 21st Century* (2003), called for a strengthening of the public health infrastructure – including increased learning opportunities. This dissertation research has shown that the integration of a culture of learning in LHDs is associated with the LHD placing a high value on learning itself. It is evident from both the quantitative LHD survey and the LHD case study that not only do numerous training and learning
opportunities exist, but systems have been put in place to continue to build the capacity of the workforce. According to this dissertation research, these systems are in the form of QI meetings and processes, mentoring, and participation in external training opportunities. When the workforce is encouraged to learn and innovate, it enhances its capacity and also places value on the learning itself. Lichtveld et al (2001) argue that gaps in workforce development can be attributed to a lack of prioritization on learning within an LHD, thus an LHD that upholds a continuous learning approach may benefit by improving its workforce capacity (Kreitner et al, 2003; Kaufman et al, 2014). In essence, an organization that places value on the learning and development of its workforce may reap the benefits of a workforce that is educated, motivated, and working at its maximum potential.

**Training Recommendations for LHDs & PHTCs**

The positive presence and actions of the group dynamic and organizational structural factors studied in the research highlight an important training opportunity for LHD leadership, and for the PHTCs, to consider. LHDs and PHTCs can strategically plan and develop trainings that incorporate these factors – such as teamwork and dialogue – for public health professionals. Specific trainings focused on these factors may enable the public health workforce to build capacity in essential leadership competencies. Further, given the positive findings related to teamwork and face to face communication and the need for strategic communication support, there may be a need for more innovative approaches to training – such as onsite, team-based training to foster group learning and team building versus train-the-trainer or online webinars. Despite the fact that PHTCs offer web-based trainings in order to make trainings more accessible for LHD staff, it may behoove both the PHTC and LHD to consider in-person approaches that emphasize in-depth and interactive learning. PHTCs and LHDs could consider providing in-person approaches at the LHD site, which would eliminate travel time while also maintaining accessibility. PHTCs and LHDs could also consider incorporating these trainings into strategic planning sessions or all-staff retreats where LHD staff are already convened.
Accreditation as a Driving Force

As communities evolve and new public health challenges loom on the horizon, learning and the evolution of the public health workforce becomes ever more necessary. As mentioned previously, the professional development of public health staff may not be a current priority, particularly when LHDs face competing administrative challenges, limited fiscal resources, and increasingly complex health problems. However, the process of accreditation, places workforce development and strategic planning at the forefront of the LHD organization. Heifetz (2009) highlights that characteristics that enable organizations to be more flexible and adaptive include developing leadership capacity, institutionalizing reflection and fostering continuous learning. The process of accreditation has thrusted the LHD cases that were studied, to encompass all of these characteristics. Heifetz (2009) also states that “being open to learning is a critical capacity for anyone seeking to enable their organization to adapt.” All three of the LHD cases exhibited an openness to learning by examining the root causes of their most pronounced abilities and inefficiencies, and implementing strategies to address them throughout the organization. This process of examination has led them all to integrate quality improvement processes in their operations. Additionally, in the process of identifying weaknesses and implementing solutions, these LHDs also acknowledge other areas needing improvement – such as in strategic communication. This acknowledgment is also part of being open to learning. Consequently, learning is a continuous process of assessment and improvement – both on an individual basis as well as organizationally.

This dissertation research has illustrated that accreditation is a process that not only aims to develop each public health worker’s professional and leadership capacity, but it is a process that cultivates the strengths of the organization as a whole. This study examined only three LHD cases, so it remains to be seen whether accreditation is not solely a capacity-building process, but a culture-shifting process, that may enable the LHD to become a more adaptive organization equipped to evolve as the complex landscape around it changes over time.
CITED LITERATURE


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APPENDICES

Appendix 1: Phase 1 Quantitative Survey – MASTER

Introduction:

Thank you for taking the time to complete this survey. In this survey you are asked to think about the various trainings your regional Public Health Training Center (PHTC) provides to local health departments in your state and/or your region.

Your name will not be included in the survey results. This research is being conducted as part of doctoral dissertation research aimed at determining the extent to which group dynamic and organizational structural factors that define a culture of learning, are active in local health departments. This dissertation research is being conducted through the University of Illinois at Chicago School of Public Health.

This survey should take approximately 15-20 minutes to complete. Your participation is greatly appreciated.

Leadership Training Topics

1. Please select all types of leadership trainings (e.g. trainings that enable individuals to develop skills, abilities & behaviors that promote individual and organizational growth) offered to local health departments (LHDs) in your region within the past 5 years: [Select all that apply] [Construct: leadership development]

   a. Vision and mission development
   b. Change management/ transitioning of resources and organizational processes
   c. Working with diverse populations
   d. Communication & consistency in information-sharing
   e. Collaborative relationships
   f. Group problem solving
   g. Other(s):

   h. No, we have not (and currently do not) provide leadership trainings to LHDs [END SURVEY]

Training Format & Frequency

For Questions 2-7, please consider the typical training year.

2. What proportion of trainings offered to LHDs are web-based? [Select one] [Capacity and reach of trainings]

   a. 0%
   b. Less than 25%
   c. Between 25-49%
d. Approximately 50%
e. Between 51-75%
f. Greater than 75%

3. How frequently are web or distance-based types of trainings offered to LHDs in your region? [Select one] [Capacity and reach of trainings]
   a. 1-2 per year
   b. 1-2 per quarter
   c. Once a month
   d. More than once a month
   e. Other: __________

4. What proportion of trainings offered to LHDs are in-person? [Select one] [Capacity and reach of trainings]
   a. 0%
   b. Less than 25%
   c. Between 25-49%
   d. Approximately 50%
   e. Between 51-75%
   f. Greater than 75%

5. Please select the various in-person training formats that you provide: [Select all that apply]
   a. Cohort-based institutes
   b. Classroom courses
   c. Blended
   d. Other: __________

6. How frequently are in-person trainings offered to LHDs in your region? [Select one]
   a. 1-2 per year
   b. 1-2 per quarter
   c. Once a month
   d. More than once a month
   e. Other: __________

7. Where are these in-person trainings offered? [Select all that apply]
   a. PHTC
   b. LHD
   c. Other: __________

8. What proportion of trainings are attended by:
   Frontline staff (e.g. community health workers, field nurses): [Select one]
   a. Less than 25%
   b. Between 25-49%
   c. Approximately 50%
   d. Between 51-75%
   e. Greater than 75%
Middle and senior-level managers (e.g. program managers, project directors, unit supervisors, executive-level supervisors): [Select one]
   a. Less than 25%
   b. Between 25-49%
   c. Approximately 50%
   d. Between 51-75%
   e. Greater than 75%

Leadership Training Participation

For Questions 9-12, please consider the previous 12 months.

9. How many LHDs in your region participated in these leadership trainings? [Select one]
    a. 1-2
    b. 2-5
    c. 5-10
    d. 10+

10. What was the greatest number of participants that attended a single training? What was the topic?

11. What was the fewest number of participants that attended a single training? What was the topic?

12. What was the average age of the training participants? [Select one]
    a. 25-35
    b. 35-45
    c. 45+

Training Needs & Priorities

13. How are the leadership training priorities identified by the PHTC?

14. How are the leadership training needs of the LHDs identified by the PHTC?  
    a. Is there an advisory committee that LHDs participate in?

15. What PHTC trainings have been found to be the most useful and/or valued to LHDs?

16. What additional training support does the PHTC provide to LHDs?

Thank you for your time in taking this survey.
Appendix 2: Phase 2 Quantitative Survey – MASTER

Introduction:

Thank you for taking the time to complete this survey. In this survey you are asked to think about how your local health department (LHD) supports learning at both a team/group level, and an organizational level. From these data, strengths will be identified from which you and your LHD may or may not decide to build upon toward becoming a learning organization.

Please respond to the following questions and determine the degree to which this is something that is, or is not true, of your LHD. Your name will not be included in the interview results. This research is being conducted as part of doctoral dissertation research aimed at determining the extent to which group dynamic and organizational structural factors that define a culture of learning, are active in local health departments. Additionally, this research aims to understand how these factors ultimately contribute to leadership competency development for the local health department. This dissertation research is being conducted through the University of Illinois at Chicago School of Public Health.

This survey should take approximately 25-35 minutes to complete. Your participation is greatly appreciated.

Group Dynamic Factors

Please think about aspects of learning and training support for individual staff in the LHD, and select ONE response for each question:

1. Staff are offered/encouraged to participate in training opportunities outside the LHD.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

2. Staff view problems in their work as an opportunity to learn.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

3. Staff appear to give open and honest feedback to each other.
   a. Very rarely
   b. Rarely
c. Sometimes
  d. Frequently
  e. Very frequently

4. Staff are encouraged to ask “why” regardless of rank.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

5. Staff are encouraged to question and challenge their “mental models” (deeply held internal images of how the world works).
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

6. Whenever staff state their view, they also ask what others think.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

7. Staff listen to others’ views before speaking.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

8. Staff seek to understand the perspectives and opinions of their colleagues.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

9. Staff share responsibility in making decisions, regardless of rank.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently
10. Staff are committed to the work that is prioritized and valued by the organization.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

11. Staff identify skills they need to for future work tasks.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

12. Staff are recognized for providing high quality products and services.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

Please consider aspects of learning and training support for groups and teams of staff at the LHD, and select ONE response for each question:

13. Groups/teams have the freedom to adapt their goals as needed.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

14. Groups/teams focus on the group’s task as well as on how well the group is working.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

15. Groups/teams revise their thinking as a result of group discussions or new information.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently
16. Groups/teams are encouraged to participate on other groups/teams internally within the LHD.
   
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

Organizational Structural Factors

Please think about aspects of learning and training support for the entire public health department/organization, and select ONE response for each question:

17. The LHD recognizes staff for taking initiative (e.g. proposing new ideas).
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

18. The LHD supports staff who take calculated risks.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

19. The LHD considers the impact of decisions on employee morale.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

20. The LHD uses 2-way communication on a regular basis, such as suggestion systems, open meetings, etc.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

21. The LHD enables staff to get needed information at any time quickly and easily.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
e. Very frequently

22. The LHD creates systems to measure gaps between current and expected performance of staff.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

23. The LHD shares its lessons learned to all staff.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

24. The LHD invites staff to contribute to the organization’s vision.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

25. The LHD builds alignment of visions across different work groups and program units.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

26. The LHD encourages staff to think from a global, “big picture” perspective.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

27. The LHD encourages everyone to bring the customers’ views into the decision making process.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

28. The LHD works together with external partners in the community to meet mutual needs.
   a. Very rarely
   b. Rarely
29. In the LHD, senior-level managers empower others to help carry out the organization’s vision.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

30. In the LHD, senior-level managers mentor those they lead and/or supervise.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

31. In the LHD, my supervisor provides me with constructive suggestions to improve my job performance.
   a. Very rarely
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Very frequently

Additional Information About You and Your Organization

32. What is your role at the LHD? [Select one] [Demographic information]
   a. Senior manager (e.g. division or unit manager, leadership team/council member, executive team member)
   b. Middle manager (e.g. program manager/assistant manager, staff supervisor)
   c. Accreditation coordinator
   d. Other: ______________

33. How long have you been employed at this LHD? [Select one] [Demographic information]
   a. 1 year or less
   b. 1-4 years
   c. 5-9 years
   d. 10-15 years
   e. More than 15 years
Appendix 3: Phase 3 Interview Guide – MASTER

Introduction:

Thank you for taking the time to speak with me today about how learning and leadership development are active in your local public health department. In answering my questions, please provide me with specific examples and I encourage you to be as candid as possible with your responses. Your name will not be included in the interview results. This research is being conducted as part of doctoral dissertation research for the University of Illinois-Chicago School of Public Health.

This interview should take approximately 45 to 60 minutes. Again, I really appreciate you taking the time to speak with me today.

The following questions are focused on understanding factors that play a role in creating a culture of learning. I will ask you several questions that will help me understand the extent to which you believe these factors are evident in your LHD. The factors I will be exploring with you are specific to group dynamics and the culture of the organization.

Firstly,

1. Please state your position, job classification and the length of time you have been working for this local public health department. [Background]

Thank you. Now…

2. Describe the learning environment in your LHD. [Background; Leadership development] *Probe: How are staff supported and encouraged to learn? What elements of the LHD environment encourage staff to ask “why”?*

3. Tell me about the learning opportunities you have engaged in throughout your career at this LHD. [Internal/External trainings; Leadership development] *Probe: Are workshops offered within this LHD? Classroom trainings? Brown bag sessions? External to this LHD?*

   a. Have you participated in any trainings offered by your regional PHTC?

4. How have the learning opportunities you have engaged in added value to your training and learning experience? [Internal/External trainings; Leadership development] *Probe: Have you found the trainings helpful or useful? If so, how?*

Group Dynamic Factors

5. How does the LHD promote work in groups or teams within the organization? [Construct: teamwork] *Probe: In what ways does the LHD prioritize teamwork? Can you give some examples of work that was done in teams & how staff felt working in teams?*

   a. Can you tell me about team work opportunities external to the LHD?
6. Can you describe how staff are allowed to experiment or demonstrate creativity in program planning or projects? [Construct: inquiry & dialogue]
   a. What are the limitations or barriers to this, if any?

7. How are staff challenged to question their “mental models” (deeply held internal images of how the world works)? [Construct: inquiry & dialogue]

8. In what ways does the LHD involve staff in the shared responsibility of making decisions? [Construct: empowerment toward a collective vision] Probe: How do staff collaborate with LHD senior leaders? How is input from staff received by LHD senior leaders?

9. Can you describe times when LHD staff have worked through alternative solutions to complex problems? [Construct: reflection] Probe: Talk about some of the challenging problems that programs or units within the LHD (or the LHD as a whole) have had to address. Describe the approach that staff took to arrive at possible solutions.
   a. Do you believe staff tend to take a proactive approach to problem-solving or a reactive approach? Can you give examples?

We are now going to talk about some factors that play a role in creating a culture of learning. I will ask you several questions that will help me understand the extent to which you believe these factors are evident in your LHD.

Organizational Cultural Factors

10. How does the LHD share information that is needed to solve problems and/or promote problem-solving approaches with staff? [Construct: knowledge-sharing systems] Probe: How are suggestion boxes, or similar types of approaches, utilized by LHD senior leaders?

11. Can you provide examples of mentoring-type opportunities that you or your staff have participated in? [Construct: knowledge-sharing systems] Probe: In what ways does your LHD support or promote a formal or informal mentoring program where staff are paired with a senior manager for a period of time? How about “shadowing” activities within the LHD?
   a. How have these opportunities helped to shape or support your professional/career development growth at this LHD?
12. Can you provide examples of ways in which executive level staff and senior managers motivate staff? [Construct: executive support] Probe: In what ways, if any, are staff rewarded? Given permission to fail?
   a. What types of actions and support are given to staff?
   b. How frequently?

13. What are some examples of how you and other LHD staff have participated in building relationships with partners in the community?
   a. Why are these relationships important? [Construct: connecting organization to environment] Probe: How have relationship-building efforts expanded the role and reach of the LHD and staff? How has this improved the functioning/effectiveness of the LHD? How has this benefitted staff?

Now I’d like for us to talk a little about how the environment in your LHD impacts leadership development for staff.

Leadership Development

14. Describe an example of how your LHD collaborates with partners. How have you worked together to achieve mutual needs? [Construct: systems thinking] Probe: What are the roles that LHD staff and partner staff or agencies have played in this collaboration?

15. Tell me how the LHD engages in goal setting and planning with your partners. [Construct: systems thinking] Probe: In what ways does the LHD support open discussions about priorities and expectations?

16. How does the LHD communicate its organizational vision and priorities, strategies and direction to partners? [Construct: strategic communication]

17. How does the LHD communicate needs and challenges with partners or stakeholders? Please provide an example. [Construct: strategic communication]

18. Tell me how the LHD supports the sharing of ideas between frontline staff and supervisors and/or senior management. [Construct: change management]
   a. How does the LHD solicit input from LHD staff regarding programmatic or structural changes that might be needed? Probe: How are change considerations made with organizational objectives in mind?
   b. How does the LHD identify the need for change?
19. Describe ways in which your LHD organization promotes or encourages LHD staff to challenge the status quo? [Construct: change management]

   a. Can you give me an example of when this occurred and how was the challenge received?

20. We have talked quite a bit about present efforts and experiences in learning and leadership development, and I’m also interested in additional elements or factors that you believe may contribute to your experience. Please describe to me what you believe these additional factors or elements are, and the role they play in promoting learning and/or leadership development within the LHD. [Other factors]

21. Is there anything else you would like to add that you think might be helpful to share?

Thank you so much for your time in speaking with me today. I really appreciate your assistance with my research.
## Appendix 4: Cronbach-alpha Analysis Results

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Exemption Granted

August 23, 2017

Tanya Bustamante
Public Health
4862 Lodi Way
Castro Valley, CA 94546
Phone: (650) 787-5341

RE: Research Protocol # 2017-0890
“Exploring Factors that Contribute to a Culture of Learning and Leadership Development in Local Health Departments”

Sponsors: None

Dear Tanya Bustamante:
Your Claim of Exemption was reviewed on August 23, 2017 and it was determined that your research protocol meets the criteria for exemption as defined in the U. S. Department of Health and Human Services Regulations for the Protection of Human Subjects [(45 CFR 46.101(b)]. You may now begin your research.

**Exemption Period:** August 23, 2017 – August 23, 2020

**Performance Site:** UIC

**Subject Population:** Adult (18+ years) subjects only

**Number of Subjects:** 12
The specific exemption category under 45 CFR 46.101(b) is:

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

You are reminded that investigators whose research involving human subjects is determined to be exempt from the federal regulations for the protection of human subjects still have responsibilities for the ethical conduct of the research under state law and UIC policy. Please be aware of the following UIC policies and responsibilities for investigators:

1. **Amendments** You are responsible for reporting any amendments to your research protocol that may affect the determination of the exemption and may result in your research no longer being eligible for the exemption that has been granted.

2. **Record Keeping** You are responsible for maintaining a copy all research related records in a secure location in the event future verification is necessary, at a minimum these documents include: the research protocol, the claim of exemption application, all questionnaires, survey instruments, interview questions and/or data collection instruments associated with this research protocol, recruiting or advertising materials, any consent forms or information sheets given to subjects, or any other pertinent documents.

3. **Final Report** When you have completed work on your research protocol, you should submit a final report to the Office for Protection of Research Subjects (OPRS).

4. **Information for Human Subjects** UIC Policy requires investigators to provide information about the research to subjects and to obtain their permission prior to their participating in the research. The information about the research should be presented to subjects as detailed in the research protocol, application and supporting documents.

Please be sure to use your research protocol number (listed above) on any documents or correspondence with the IRB concerning your research protocol.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact me at (312) 355-2908 or the OPRS office at (312) 996-1711.
Sincerely,

Charles W. Hoehne, B.S.

Assistant Director, IRB #7

Office for the Protection of Research Subjects

cc: Paul Brandt-Rauf, Public Health, M/C 923

Steven Seweryn, Doctor of Public Health (DrPH) Program, M/C 923
VITA
Tanya J. Bustamante

EDUCATION

University of Illinois-School of Public Health, Chicago, Illinois

University of California, Berkeley, School of Public Health, Berkeley, California

Bachelor of Arts, Human Biology (2001)
Stanford University, Stanford, California

WORK EXPERIENCE

Aging Services Division Manager, December 2017- present
Responsible for programmatic and budget oversight of Aging Services Division in Health, Housing & Community Services Department
City of Berkeley Public Health Division
Berkeley, CA

Section Chief, August 2016- December 2017
Responsible for programmatic and budget management and oversight of health promotion programs and Emergency Preparedness Unit in Public Health Division
City of Berkeley Public Health Division
Berkeley, CA

Program Manager, July 2013- August 2016
Responsible for programmatic and budget development, implementation, & management of pilot Community Preparedness & Engagement Program (7/2013-6/2014) & Tobacco Prevention Program (7/2014 – 9/2016)
City of Berkeley Public Health Division
Berkeley, CA

Coordinator, 2011-2013
Responsible for internal training coordination and plan writing for Public Health Emergency Preparedness Program
San Francisco Department of Public Health
San Francisco, CA

Program Manager, 2010-2011
Responsible for management of federally funded Public Health Preparedness Program
City of Berkeley Public Health Division
Berkeley, CA
Pandemic Influenza Program Specialist/Tobacco Prevention Projects Coordinator, 2007-2010
Responsible for coordinating influenza prevention community campaigns; coordinating youth intern-led tobacco prevention activities and workshops
City of Berkeley Public Health Division
Berkeley, CA

California Epidemiologic Intelligence Service Fellow, 2006-2007
Responsible for developing communicable disease protocols for Communicable Disease Unit, & coordinating influenza prevention community campaigns
City of Berkeley Public Health Division
Berkeley, CA

Research Assistant/Intern, 2004-2006
Responsible for data entry & analysis of foodborne diseases collected through active surveillance
California Emerging Infections Program (CDC)
Oakland, CA

LEADERSHIP SKILLS & EXPERIENCE: PROGRAMS

Division Manager, Aging Services:
• Currently leading Age-Friendly Initiative for City of Berkeley. The Age-Friendly Initiative is part of a World Health Organization designation and a component of City’s Strategic Plan.

Section Chief, Health Promotion & Emergency Preparedness:
• Led strategic planning for Nutrition suite of programs in Public Health Division.
• Oversight of Results-based Accountability QI process for health promotion programs.

Program Manager, Community Preparedness & Engagement:
• Developed an innovative pilot emergency preparedness program aimed at educating and training underserved residents of Berkeley.
• Developed a Division-wide youth intern leadership manual consisting of readings and activities designed to introduce leadership elements and initiate critical thought and analysis in Public Health Division youth interns.

Coordinator, Public Health Emergency Preparedness Program:
• Planned, coordinated, and conducted trainings for Department of Public Health staff to develop and strengthen internal preparedness response and infrastructure so that Department respond to City and County emergencies more efficiently.

Program Manager, Public Health Preparedness:
• Launched Latino Preparedness Promotora program (lay community health workers) with the goal of imparting professional development skills and emergency preparedness and other public health topical knowledge to community and neighborhood leaders.
• Planned and conducted emergency preparedness trainings and workshops for community-based organizations serving populations with special needs.
LEADERSHIP SKILLS & EXPERIENCE: COMMITTEES/ WORKGROUPS

Division Manager, Aging Services:

- Member, Health, Housing & Community Services Department Leadership Team: Team consists of eight executive-level Division managers responsible for leading Department efforts in strategic planning, communication, and change management. 2017-present.

Program Manager, Tobacco Prevention:

- Co-chair, City of Berkeley Tobacco Prevention Coalition: Responsible for co-facilitating coalition consisting of community-based organizations, higher learning institutions, and other local partners in strategic planning around tobacco education & outreach, and tobacco-related policy efforts in Berkeley. 2013 – present.
- Member, Department Change Team Steering Committee: One of three employees selected Department-wide to select additional Committee members and lead Department efforts in strategic change management around racial and cultural controversies in the workplace. 2014-present.

Program Manager, Community Preparedness & Engagement:

- Chair, LIDER Action Team: Assisted in convening a collaborative group consisting of individuals from various City and community agencies to lead community efforts on establishing a culturally-competent and sustainable team of Latino community leaders trained in emergency preparedness and committed to neighborhood and civic activism. 2013-2014.

Coordinator, Public Health Emergency Preparedness Program:

- Chair, Training Working Group: Facilitated Department-wide Work Group tasked with developing emergency preparedness training recommendations and strategies for internal Department staff so that they are better prepared to respond to emergency situations in the City and County of San Francisco. 2012-2013.

PRESENTATIONS


OTHER LEADERSHIP CONTRIBUTIONS

- Active Mentor in Stanford Alumni Mentoring Program: Mentoring current Stanford University undergraduate students around the personal and professional choices and opportunities that help shape them to be future leaders in the health sciences field. 2011- present.
- Intern supervisor and mentor at City of Berkeley Public Health Division: Supervised and mentored current and previous undergraduate and graduate student interns. Provided public health programmatic coaching and advising; provided public health career mentoring post-internship. 2013-2017.
- UC Berkeley School of Public Health Preceptorship: Provided guidance and instruction – as well as professional mentoring – to UC Berkeley School of Public Health Intern during development of public health emergency communications network for local City agencies and community organizations. 2008.