Perceptions of General Education Deans and Department Chairs of their Colleges as Learning Organizations

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PERCEPTIONS OF GENERAL EDUCATION DEANS AND DEPARTMENT CHAIRS OF THEIR COLLEGES AS LEARNING ORGANIZATIONS

by

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A dissertation submitted to the Graduate College in partial fulfillment of the requirements for the degree of Doctor of Philosophy Educational Leadership, Research, and Technology Western Michigan University April 2014

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PERCEPTIONS OF GENERAL EDUCATION DEANS AND DEPARTMENT CHAIRS OF THEIR COLLEGES AS LEARNING ORGANIZATIONS

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Western Michigan University, 2014

Higher education institutions are being pushed towards increased assessment practices because of rising costs, mass access, new delivery methods, and rising competition on the national and global scale. Academic deans and department heads are at the center of these assessment efforts, and assessment should guide changes within the organization for improvement. Learning organization theory provides a framework for creating an environment favorable to assessment and improvement. Six learning organization principles – learning, communication, measurement, problem-solving, structure, and vision – were used for this study.

An online questionnaire was used to capture the perceptions of deans and department heads as to the presence and use of learning organization principles within their academic colleges. Responses were received from 180 academic leaders across the United States in general education academic colleges at professions-focused institutions. These are institutions which offer at least 80% of their degree programs in career-oriented fields.

The findings of the study indicate that learning organization principles are
somewhat present within general education colleges, and the leaders believe their colleges to possess some aspects of learning organizations. The results also indicate that most leaders did not perceive their colleges to be using the principles towards improvement, although the leaders reported a high level of perceived success on performance indicators.

Learning, measurement, problem-solving, structure, and vision were found to be predictive of the perception of improvement from the use of the learning organization principles. Two of the learning organization principles, learning and structure, were also found to be predictors for perceived success. Suggestions from academic leaders revealed four additional findings: (a) more emphasis on learning is needed, (b) organizations should improve communication with stakeholders, (c) the right leadership must be in place, and (d) some structural changes within institutions are needed.

Overall, the results of the study reveal that subsets of higher educational institutions can possess some aspects of learning organization principles. The results also indicate a high level of perceived assessment activity in these academic colleges and the movement of these leaders towards using data and information to improve their organizations and success on performance indicators.
DEDICATION

For Elizabeth and Michael, my greatest gifts
ACKNOWLEDGMENTS

I am thankful for the leadership of my committee chair, Louann Bierlein Palmer, who demonstrated the qualities of a successful leader and teacher in guiding me on this journey. I appreciate that she let me find my way, even though it may have been easier had she simply told me which direction to take. Her perseverance is as much to be applauded as mine.

I am thankful for my committee members, Sue Poppink and Scott Epstein. Sue was with me at the beginning of my journey and provided such good guidance then and at the end. Her good-natured support helped me to continue to move forward, even when I was frustrated. Scott was so gracious to bring his knowledge of quality and continuous improvement practices in higher education to enhance my study. His investment in quality initiatives is admirable and is encouraging to me as I move forward in my work.

I am thankful for my fellow doctoral classmates – those who started with me, those who finished ahead of me, those still toiling the soil, and those who offered their wisdom on finishing just as I was starting out. Your collaboration on projects, feedback on writing, and general collegiality, humor, and wisdom enhanced my doctoral experience. I am also thankful to my professional colleagues who provided feedback, statistical support, books, advice, chocolate, encouragement throughout the process, and celebration at each mile marker of the journey.

I am thankful to the participants of my study who took time to respond to my questionnaire and add their unique perspective to research in higher education.
Acknowledgments – Continued

I am also thankful for my parents, extended family and friends, who always believed I could meet this goal. Thank you for giving me the encouragement I needed to persevere. I am sure there are days when I would have abandoned the journey if not for the right word along the way.

I am most thankful to my husband, Michael, who shouldered so many additional responsibilities for our home and family, and my daughter, who made as many or more sacrifices as I and her father did so I could pursue this goal. Your perseverance is also to be applauded. I hope at some point, Elizabeth, you will be encouraged by having watched your mother take this journey. In many ways, this journey has been as much for the both of you as it has been for me. Thank you both for your patience, support, and love; I could not have done it without you.

May Charmayne Mulligan
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CHAPTER I
INTRODUCTION

Higher education has moved into a new era involving measurement, assessment, reporting, and accountability, with a goal of attaining measurable outcomes and quality improvement. In 2005, the State Higher Education Executive Officers (SHEEO) organized the National Commission on Accountability in Higher Education. Citing low graduation rates, higher college costs, and a decline in international ranking of students completing college, the commission called for increased accountability toward results (National Commission on Accountability in Higher Education, 2005). These rising costs and reduced graduation rates, along with reduced funding, greater variation among the student body, and a push for mass access, have changed higher education. There are also concerns about teaching quality, class size, and curriculum (Chait, 2002; Talburt & Boyles, 2005), and the globalization of education and the global economy are also factors (Huisman & Currie, 2004).

These changes, along with changes to the K-12 system, have intensified demands for accountability (Alexander, 2000; American Council on Education, 2004; Arum & Roksa, 2010; Asquith, 2006, Astin & Antonio, 2012; Burke, 2005; Carey, 2007; Dill, 1999; Miller, 2008; Obama, 2013; Trow, 1996; Carey, 2007). The latest “Guiding Values” of the Higher Learning Commission illustrate this new culture with its emphasis on student learning, assessment, and continuous improvement (The Higher Learning Commission, 2013). Zumeta (2011), former Association for the Study of Higher Education president, argued that “accountability expectations … are more demanding and elaborated now than in the past” (p. 133).
Accreditation and institutional award systems also reflect this shift in emphasis. Institutions can now seek alternative accreditation through the Academic Quality Improvement Program (AQIP) from the Higher Learning Commission which emphasizes quality improvement processes (Higher Learning Commission, 2013). Some higher education institutions have also applied for the Baldrige Performance Excellence Program as a symbol of their excellence and quality. The emphasis of the award process is on improving results in specific areas including student learning (The National Institute of Standards and Technology, 2012b).

The push for quality in manufacturing began in the United States in the 1950s (Crosby, 1979; Deming, 1986; Juran, 1962; Juran & Defeo, 2010), but did not become prevalent in higher education until the 1980s and 1990s (Alexander, 2000; Carey, 2007; Shin, 2010; Wolverton, 1994; 20 U.S.C. §1092). While an emphasis on quality in higher education is not new, how it has been measured or perceived has varied (Abate, Stamatakis, & Haggett, 2003; Astin & Antonio, 2012; Bergquist & Pawlak, 2008; Deming, 1982; Glassick, Huber, & Maeroff, 1997; Harvey & Green, 1993; Houston, 2008; Juran & Defeo, 2010; Koslowski, 2006; Liu, 2011; Lohmann, 2004; Nordvall & Braxton, 1996; Powell, Gilleland, & Pearson, 2012; Watty, 2005; Wolverton, 1994). Indeed, perception of quality is often linked to perceived or actual institutional success (Ewell, Boeke, & Zis, 2010). Perceived institutional quality has also been indicated by various systems and methods (American Council on Education, 2004; Astin & Antonio, 2012; “About VSA,” 2011; Liu, 2011; Stake, Contreras, & Arbescu, 2012). Several organizations now provide awards or rankings for quality (Council for Higher Education Accreditation, 2012; NIST, 2012a).
This focus on quality has led to an increased emphasis on accountability (American Council on Education, 2004; Carey, 2007; Weiner, 2009). Various definitions of accountability exist (ACE, 2004; Burke, 2005; Carey, 2007; Huisman & Currie, 2004; Romzek, 2000; Trow, 1996). And states have used accountability with varied results (Alexander, 2000; Blake, 2006; Carey, 2007; Johnson, 2006; Kupchella, 2006; Martinez, 2006; Moore, 2006; Noland, 2006; Powell, Gilleland, & Pearson, 2012; Shin, 2010). Studies on various institutional types complicate efforts to compare institutions (Achtemeier & Simpson, 2005; Burke, 2005; Klein, Kuh, Chun, Hamilton, & Shavelson, 2005; McLendon, Hearn & Deaton, 2006; Peterson & Augustine, 2000), and culture and structure are important considerations for any change system (Wong & Tierney, 2001).

This push for accountability has led to what Weiner (2009) called a “culture of assessment” (para.1). Various assessments exist for reporting and data collection (Ewell, 2008; 2009); assessment is taking place largely at the department level (Ewell, Paulson, & Kinzie, 2011). Ongoing assessment has become part of accountability and accreditation (Peterson & Augustine, 2000), and is used for various purposes (Ewell, Paulson, & Kinzie, 2011). Primarily, assessment has focused on student learning outcomes (Astin & Antonio, 2012; Peterson & Augustine, 2000; Klemic & Lovero, 2011), curriculum assessment (Abate, Stamatakis, & Haggett, 2003; Klemic & Lovero, 2011; Peterson, Wittstrom & Smith, 2011), and program evaluation (Abate, Stamatakis, & Haggett, 2003).

The overall result of quality, accountability, and assessment should be improvement (Astin & Antonio, 2012; Castiglia & Turi, 2011; Houston, 2008). However, not all action leads to improved quality or performance. Some accountability
measures are intended to count existing activities rather than initiate any improvement or
reform (Huisman & Currie, 2004), and others demonstrate conformance (Houston, 2008).
Ewell (2009) identified two models of assessment, noting the differences between
assessment for accountability and assessment for improvement. Yet, Kuh and Ikenberry
(2009) argued that as much as higher education is doing, more needs to be done, and
assessment without change will not be successful (Romzek, 2000).

To that end, organizations need to focus less on simply collecting and reporting
data and more on identifying areas for improvement. Employing the principles of a
learning organization bridges the gap between quality, accountability, and assessment
and continuous improvement processes. For example, Senge (1990b) noted the link
between the Total Quality Management movement in Japan and the need for
organizations to learn in order to improve quality. Continuous improvement is a critical
aspect of learning organizations, and quality comes from a unified vision developed out
of pride in the organization (Kline & Saunders, 1998).

Becoming a learning organization is the method by which organizations can
identify and correct errors (Argyris, 1977), and then adapt by developing ways of
performing in a very deliberate and intentional manner to change behavior (Garvin,
1994). Such efforts must encompass the whole organization; learning takes place as a
whole, not just among individuals within the organization (Kline & Saunders, 1998).
Indeed, Senge (1990a, 1990b) made the link between learning organization behaviors and
change, while Dill (1999) made the link between the rise in accountability in higher
education and the need for academic learning organizations. Yet, challenges to assessing
higher educational institutions and academic units as learning organizations exist because
of their hierarchical structure, diverse disciplines, and varied institutional types.

Indeed, learning organization processes create focus around change to meet
demands for quality, accountability, and assessment in higher education, and institutions
need to use data to drive change and improve. Measurement and assessment without
learning and improvement is not useful to organizations. The purpose of my study,
therefore, is to examine the perceptions of academic leaders as to the extent learning
organization principles are present and to what extent these leaders feel these principles
are being used for perceived successful improvement within their organizations, and
whether these principles and their usage are linked to perceived success on performance
indicators. Understanding this information will add insight into what behaviors may help
academic units become learning organizations and how this information may be linked to
perceived improvement or success on performance indicators.

**Problem Statement and Research Questions**

Institutions that function as learning organizations take information and use it to
influence change. The extant theory on learning organizations presents an existing
framework institutions can use to engage in continuous improvement. Senge (1990a)
proposed five *disciplines* of a learning organization: personal mastery, mental models,
shared vision, systems thinking, and team learning. Lei, McGill, and Slocum (1992)
added to the understanding of learning within an industrial context. Building on Senge’s
work, Garvin (1994) posited his own definition and suggested three steps and five
behaviors to increase the practicality and usefulness of learning organization theory. He
argued that without learning, organizations continually repeat old behaviors. Kline and
Saunders (1998), also drawing on Senge (1990a), focused on practicality and created ten
steps institutions could use for developing a learning organization. In his study of academic institutions, Dill (1999) proposed five behaviors academic organizations must have and argued that each was necessary to address quality improvement processes.

While these individuals have embraced learning organization principles as a vehicle for change, not everyone agrees with the theory or its practice in either for-profit or educational settings. There is some debate about the value of learning organization theory in general, its practicality, effectiveness to drive change, and continued relevance for either business or higher education (Caldwell, 2012; Dymock & McCarthy, 2006; Fenwick, 1997; Grieves, 2008; Jamali, Sidani, & Zouein, 2009; Örtenblad, 2002; Senge, 1996; Smith, 2008). Also, some have argued that higher education does not engage in the behaviors of a learning organization (Abate, Stamatakis, & Haggett, 2003; Dill, 1999; Garvin, 1994; Watkins, 2005) or use them only in a limited way (Bak, 2012; Martin, 1999; Senge, 2000).

To measure whether organizations were learning organizations, Marsick and Watkins (2003; Watkins & Marsick, 1997) developed a conceptual framework of seven dimensions which became the Dimensions of a Learning Organization Questionnaire. Yang (2003) and Yang, Watkins, and Marsick (2004) have subsequently validated the instrument. The framework and questionnaire have been used in a variety of non-academic organizational contexts and situations with mixed results (Birdthistle, 2008; Dymock & McCarthy, 2006; Ellinger, Ellinger, Yang, & Howton, 2002; Hunter-Johnson & Closson, 2012; Jamali, Sidani, & Zouein, 2009; Kumar, 2005; Stothard, Talbot, Drobnjak, & Fischer, 2013; Weldy & Gillis, 2010). Other studies examine the perceptions of leaders and employees outside of academia (Filstad & Gottschalk 2011;
Weldy & Gillis, 2010). Additional studies, using other instrumentation, add to the understanding of principles (Lei, McGill, & Slocum, 1992), examine predictors of learning organization behaviors (Griego, Geroy, & Wright, 2000), and create a framework for creating and studying learning organizations (Bui & Baruch, 2010; Bui & Baruch, 2012).

Previewing studies within higher education show an emphasis on both the institutional level as well as component parts of the academic institutions. Watkins (2005) proposed specific behaviors. Others have conducted studies to determine the presence of learning organization principles within higher education (Bui & Baruch, 2012; Kumar, 2005; Kumar & Idris, 2006; White & Weathersby, 2005). Some studies have looked at academic staff (Ali, 2012) and faculty (Khasawneh, 2011), while others address specific subunits of institutions such as committees (Bauman, 2005; Davis & Davis, 2009), academic departments (Holyoke, Sturko, Wood, & Wu, 2012), university partnerships (Borzsony & Hunter, 1996; Scott & Dixon, 2009), teaching quality (Collie & Taylor, 2004) and courses (Ions & Minton, 2012). While some of these studies address hierarchical structures and specific sub-units of organizations, such as academic departments and committees, none have examined specifically leaders within specific units or disciplines at institutions with a professions focus. These institutions are those that emphasize academic programs leading to specific professional work such as nursing accounting, or engineering. They have their own Carnegie classification as “professions focus” and must offer at least 80% of their degree programs in a professional area (“Classification Description,” n.d.).

To gain an understanding of whether department chairs and academic deans
perceive their college to be a learning organization, knowledge is needed from academic leaders within institutions with a professions focus, specifically school or college deans and division or department chairs in general education. Although various organizational cultures exist within higher education (Bergquist & Pawlak, 2008), the overall structure within higher education is hierarchical with subdivisions based largely on discipline (Dill, 1992; Hammond, 2004). These disciplines form the basis of academic departments and colleges which often function separately from the University and have been described as loosely-coupled systems (Bonvillian & Dennis, 1995; Kline and Saunders, 1998; Koslowski, 2006; Weick, 1976). As the leaders of these units, deans and department chairpersons have specific tasks including preservation of instructional and program quality and are responsible for assessment initiatives (Ewell, Paulson, & Kinzie, 2011; Gardiner, 2000; Lucas, 2000; Tucker & Bryan, 1991; Wolverton, Gmelch, & Sorenson, 1998). Part faculty, part administrator, deans and chairs share a unique perspective different from faculty without administrative responsibilities or individuals who are exclusively administrative leaders (Koslowski, 2006; Gardiner, 2000; Tucker & Bryan, 1991; Wolverton, Gmelch, & Sorenson, 1998).

One academic subdivision is general education; these courses are an important specific area of higher education because they have been at the center of institutional assessment efforts, are most transferable, and are the foundation for all degree programs (Ewell, Boeke, & Zis, 2010; Shoenberg, 2004; Weiner, 2009). As one specific type of institution, colleges and universities with a professions focus deserve examination separately from other institutions because of their emphasis on professional undergraduate programs, although they may offer some graduate degrees (“Classification
Indeed, higher education institutions have entered into an ambiguous time. Most academic leaders must balance declining funding with increased costs, changing enrollments, and questions about the quality of faculty, programs, and delivery methods. These new pressures are reflective of the accountability measures being placed in the K-12 system. Stakeholders have questioned the quality of institutions, and governmental agencies, governmental and institutional leaders, and accrediting bodies are looking for ways to ensure quality and provide accountability to answer these questions.

Higher education is going to have to change to embrace continuous improvement practices, but Martin (1999) argued they are unable to do so at the rate and level necessary. This is largely because of their unique organizational structure and diverse institutional types. Understanding to what extent institutions are already practicing the principles of a learning organization within their distinct organizational units, such as general education colleges, could help institutions understand what change may be necessary to improve quality and engage in continuous improvement practices. And, because of their unique focus on specific careers, colleges with a professions focus may structure themselves more in line with business practices than academic ones. Thus, they may be more likely to perceive their academic colleges to be learning organizations and link these beliefs to perceived improvement and perceived success on performance indicators.

My overall study seeks to gain knowledge on how academic deans and department chairs in general education at institutions with a professions focus assess the conditions in their colleges relative to factors associated with the principles of a learning
organization and with perceived measures of improvement and success. My specific research questions are:

1. To what extent do these leaders perceive their colleges to be engaged in the
   (a) six principles of a learning organization (i.e., Learning, Communication, Measurement, Problem-solving, Structure, and Vision), and
   (b) use of these principles toward successful improvement, and
   (c) perceived levels of success?
2. To what extent are there connections between and among the perceived presence of the six principles of a learning organization, the usage of such principles for improvement, and levels of success?
3. What suggestions do deans and chairs have as to what is necessary for their college to develop stronger learning organization principles?

Conceptual Framework

To develop a comprehensive understanding of the principles of learning organizations, I examined the work of five researchers selected for their expertise in the topic area: Senge (1990a, 1990b), Garvin (1993, 1994), Kline and Saunders (1998), and Dill (1999). Senge’s work is considered the foundational theory for learning organizations; Garvin, Kline and Saunders, and Dill have used this foundational work as the basis for work specific to the workplace, including higher education. Each researcher has had his specific phrasing for the five to 10 principles proposed, and each has had a specific audience and population in mind when selecting his wording and definitions. For example, Senge’s (1990a, 1990b) principles were developed as a leadership model, but have been adapted for schools (Senge, 2000) and organizations focused on change.

As I reviewed each work, I developed a table in which I summarized each proposed learning organization principle. In the areas where the ideas intersected, I assigned a broad, easily-understood label to each principle. For the purposes of this study, the principles of a learning organization as defined by these researchers will be organized under the following labels: learning, communication, measurement, problem-solving, structure, and vision. I selected these categories as they represented in a broad way the diverse ideas of the researchers, and could be clearly understood by someone who was not familiar with learning organization theory. Using these categories also facilitates the construction of questions for the measurement tool. In some cases, some of the information in the categories overlapped, such as measurement used to gain knowledge. In this case, I selected the principles that aligned more specifically with the behavior. The table in Appendix A shows which specific behaviors relate to each of the concepts as defined by the researchers. A review of the literature in Chapter 2 considers each of these theories in greater detail. Figure 1 provides a visual diagram of the six categories in my study and their relationship to the perceived improvement gained from the use of the learning organization principles and perceived success with performance indicators. This diagram serves as my study’s conceptual framework, a visual representation showing the relationship of variables to one another (Creswell, 2008).
Figure 1: Conceptual framework of learning organization principles (Mulligan, 2013).
The first principle of a learning organization to be explored is learning. For Senge (1990a), individuals within a learning organization need to serve as resources for one another, with colleagues serving as learning leaders. Individuals within organizations can also create information for the institution (Senge, 1990b). Senge’s (1990a) principle of personal mastery encouraged individuals to engage in continuous learning, sustaining the creative tension between what they want and what they have. Individuals have to use the current reality to drive their personal change, and they must see themselves as part of a creative unit. For Garvin (1994), learning derived from understanding the way others work and from making use of others’ experiences. Both Garvin and Dill (1999) believed that individuals within a learning organization needed to learn from one another, and Kline and Saunders (1998) believed that a learning organization encouraged individuals to support their own as well as others’ learning. Individuals within a learning organization should systematically apply learning to make change (Dill, 1999). Institutions that practice learning organization principles align training with application (Kline & Saunders, 1998).

*Communication* is also an essential principle found within learning organizations, whereby individuals communicate with one another and ask for support (Senge, 1990b), and they are encouraged to share ideas with one another (Kline & Saunders, 1998). Members of a learning organization share data, understand how and why, transfer knowledge to each other through written and oral reports, and share information gained with others through multiple methods such as site visits, trainings, presentations, videos, and cross training (Garvin, 1994). Within learning organizations, communication also exists between customers, workers, and stakeholders (Garvin, 1994; Kline & Saunders,
1998), and managers must be willing to hear not only good news but bad news as well
(Garvin, 1994). Overall, a learning organization creates a safe place for people to express
themselves (Kline & Saunders, 1998). For Dill (1999), an academic learning
organization is one that was designed to improve communication among and across
academic units; some examples of this are curriculum coordinators, faculty committees,
and discipline-related units such as schools.

Measurement is an essential principle of a learning organization; knowledge from
information collected through measurement should be used to guide improvement. This
is what Dill (1999) called “knowledge-based improvement” (p. 143). Within learning
organizations, leaders test generalizations and assumptions (Senge, 1990b). They
courage experimentation, especially with an emphasis on the scientific method,
innovation, and the “systematic searching for and testing of new knowledge” (Garvin,
1994, p. 22). Leaders also organize and present data, evaluate experiments and
innovation, and analyze results. They may do this through surveys, questionnaires,
interviews, observations, and site visits (Garvin, 1994). Within academic units, leaders
evaluate individual faculty performance through peer evaluation, performance contracts,
and student evaluations of teaching. Academic units also use student-related
measurements such as course demand, placement, student satisfaction measures, and
graduation rates and time to completion for students (Dill, 1999). Organizations should
also take time to evaluate trainings and follow continuous improvement processes (Kline

A fourth principle of learning organizations is problem-solving. Individuals
should be able to adapt within organizations. Leaders within learning organizations
should identify problems to be solved to produce the greatest impact toward long-term results, and they should avoid quick-fixes and reactionary decisions. There must be processes in place so that change can happen (Senge, 1990b). The information derived from measurement and experimentation, as discussed above, is used for problem-solving (Garvin, 1994), and this knowledge is used for problem solving and, ultimately, improvement (Dill, 1999).

The structure of a learning organization, specifically one within an academic unit, must permit communication between units, especially in higher education where units may be divided by discipline (Dill, 1999). Dill (1999) argued that faculty committees and teaching and learning centers can be structural elements to support this work. In other types of organizations, leadership within learning organizations can see how the parts within the organization interact, and individual team members understand how variables interact over time (Senge, 1990b). In much of the literature about learning organizations, there is an emphasis on the system and systemic thinking. Leaders within learning organizations use systems theory to “see how the interacting elements in a complex situation work together” (Kline & Saunders, 1998, p. 231).

The final principle of learning organizations is vision. Within a learning organization, leaders bring current views to the surface (Senge 1990a, 1990b). They must also focus on positive rather than negative visions by encouraging aspiration rather than fear (Senge, 1990b). Leaders within learning organizations understand others’ views, recognize creative tension, encourage personal visions, and engage in ongoing visioning. They also see the current reality of the system, and they understand there are new ways of viewing situations (Senge, 1990b). Learning organizations are willing to
take risks toward the long-term vision and understand that the organization must have a “readiness for risk” (Kline & Saunders, 1998, p. 187). Within a learning organization, everyone feels ownership of the vision; they know the value they contribute to the team, and they have pride in what they do within the organization (Kline & Saunders, 1998).

As noted, Figure 1 provides a conceptual framework offering a visual representation of these broad categories with the specific activities assigned to the appropriate principle. This conceptual map illustrates the framework through which the questions for my study will be viewed.

**Summary of Methods**

A web-based questionnaire was used to survey deans and department heads in general education disciplines at colleges with a professions focus from across the United States. The questionnaire, confidentiality statement, and informational letter were sent to 835 academic leaders through email, the addresses of which were collected from public sources. The questionnaire asked respondents to identify the presence of learning organization behaviors as outlined in the conceptual framework. The questionnaire was divided into nine sections. The first six sections of questions included behavioral statements. Academic leaders were asked to respond to each using a six-point Likert scale, from (1) never to (6) always, as to the presence of behaviors for the six learning organization principles as identified through my review of the literature from Senge (1990a, 1990b), Garvin (1993, 1994), Kline and Saunders (1998), and Dill (1999). The last question in each of these sections asked the leaders to what extent the information gained from the principles was used for improvement. An additional section asked the leaders to identify to what extent they were successful on 10 common performance
indicators in higher education, such as student learning outcomes and curriculum and program assessment. The final open-ended question gathered suggestions from the academic leaders as to what was necessary for their colleges to become learning organizations. The last section was used to collect limited demographic information about the leaders and their institutions such as institution type and size.

Summary

This chapter has highlighted the challenges to higher education in the areas of accountability, quality, measurement, and assessment. While most institutions engage in self-study and evaluation as part of their institutional and programmatic accreditation, more needs to be done. Higher education is challenged by its hierarchical structure and various institutional cultures in implementing any widespread quality or continuous improvement initiative. The principles of a learning organization can provide one framework by which institutions create an environment of meaningful assessment to guide colleges toward improvement. The next chapter provides a detailed review of the literature in these areas.
CHAPTER II
LITERATURE REVIEW

This chapter examines literature relevant to understanding learning organization theory, and its use by academic leaders in colleges within higher education. Following a brief background, this section examines (a) quality, accountability, and assessment within higher education; (b) learning organization theory; (c) learning organizations in non-academic settings; (d) learning organizations within academic organizations; and (e) the organization of higher education institutions.

Background

In 1990, Congress passed the Federal Student Right-to-Know and Campus Security Act of 1990 (20 U.S.C. §1092) which required colleges and universities to begin reporting graduation rates to help students make decisions about the quality of education afforded them at various institutions. Congress cited low graduation rates and concerns that students were not performing well as the need for the legislation. More recently, public concern over the costs and quality of education received by undergraduates has pushed stakeholders to ask institutions for further proof of the quality of their programs, services, and graduates (American Council on Education, 2004). Some have cited the increased use of part-time faculty and graduate teaching assistants, large class size, and questionable curricula as reasons for the need for more oversight and accountability (Chait, 2002; Talburt & Boyles, 2005). And still others have raised concerns about tenure and the perception that faculty have guaranteed employment even if they are poorly performing (Chait, 2002).

Alexander (2000) concluded from a review of literature on accountability that
there are three main challenges in higher education: rising costs, reduced funding, and changes in the student population. Indeed, there has been a movement toward mass education and universality of access (Alexander, 2000; Trow, 1996). This means that for most developed countries, the expectation that students will attend college has risen. Because of this expectation, there is a tension between offering access to students while also trying to preserve quality. This reflects a shift in the role of education as an element of the market rather than a common good of the people (Burke, 2005). Because of increased access, there is also more variation among the student body; new methods of delivering education, such as online and distance programs have also been a driver (Dill, 1999). Conner and Rabovsky (2011) conducted a more recent literature review for articles published from 2009-2011, and four areas of importance in higher education were most prominent: governance and accountability, financial support from governmental bodies, political issues surrounding funding, and equity and diversity. These four issues highlight the current challenges facing higher education.

The cost of higher education is perhaps the most concerning. College costs for families have increased because of decreased funding from state governments; state funding to public institutions is on average 28% less per student in 2013 than in 2008. To make up for funding shortfalls, institutions have raised tuition about 27% on average for public institutions in the same time period. Overall, the cost of college has outpaced the growth in median income (Oliff, Palacios, Johnson, & Leachman, 2013). As costs increase, stakeholders have raised questions about the value of higher education (Liu, 2011). Accountability reforms in the K-12 system, including No Child Left Behind in 2002 (U.S. Department of Education [USDOE], 2013) and Race to the Top legislation in
2009 (USDOE, 2013), have served as an impetus for higher education to look for ways to demonstrate its value and effectiveness (Astin & Antonio, 2012; Carey, 2007). Margaret Spellings, former U.S. Secretary of Education, instituted a commission in 2005 to study accountability and assessment in higher education. She argued, “I think more and more people are going to ask…what is the value added to kids, and what are their prospects for employment or for continued higher ed?” (Asquith, 2006, p. 29). In his 2013 State of the Union address, President Barack Obama argued that most individuals will need a college education in the future, but taxpayers cannot bear the sole burden of financing higher education. Colleges must work to make degrees more affordable. Additionally, he proposed cost and value as some of the criteria by which parents and students can compare colleges to get “the most bang for your educational buck” (Obama, 2013, para. 46).

**Quality**

Because of the need to justify monies spent on higher education, a push for greater quality within higher education began in the 1980s and 1990s (Watty, 2005; Wolverton, 1994). In business, however, the push for quality in the United States began in the 1950s, following Japan’s adoption of quality principles in its manufacturing processes; prior to this time, there was a belief that manufacturing could not have both quality and increased production (Deming, 1986). Since this time, many corporations and organizations have embraced quality practices as a way to better productivity and the quality of goods and services (Deming, 1986). Juran (1962; Juran & Defeo, 2010), Deming (1986), and Crosby (1979) are largely credited with bringing the quality movement to the United States and promoting its usefulness for corporations.
Definitions of quality vary among authors and researchers, depending on whether the focus or the audience of the work is a corporation or higher education. Some emphasize the production of usable, workable parts for manufacturing (Deming, 1982; Juran, 1962). A popular conceptualization of “quality” in manufacturing was “zero defects” or absence of variation in the production process (Deming, 1982). It has also been defined as “conformance to requirements” (Crosby, 1979), “fitness for use” (Juran, 1962), and “fitness of purpose” (Juran & Defeo, 2010). Quality has also been defined in terms of customer satisfaction or the level at which a product or service meets the customer’s needs (Juran & Defeo, 2010).

**Quality in Business**

Deming (1986) posited that improved quality always leads to reduced costs, better service, and improved worker productivity. Poor quality was sure to lead to a product’s loss of market share. Of the production chain, Deming (1986) believed the consumer was the most significant part and that “quality should be aimed at the needs of the consumer, present and future” (p. 5). He argued that his principles were useful beyond business, including higher education and government services. For quality, companies and service organizations should focus on the processes, not the product. Evaluating only the product for quality is too late; indeed, by the time of production, the mistakes have already been made and are very costly to fix. It is generally the system, rather than individuals, specifically those in production, who are responsible for issues related to quality. And evaluation of performance must be focused on completion of goals rather than on a fixed production of outputs (Deming, 1986).
Quality in Higher Education

Following the use of these quality principles in business, higher education began to adopt quality measures in the 1980s and 1990s as discussed by Deming, Juran, and Crosby. Some institutions began using Crosby’s model in 1986; most institutions, however, began to use total quality management principles in 1990 when the shift toward greater accountability for state appropriations began (Alexander, 2000; Carey, 2007; Shin, 2010). Wolverton (1994) argued that the publication of two specific texts prompted institutional use: *Using Deming to Improve Colleges and Universities* (1990) and *On Q: Causing Quality in Higher Education* (1992).

Quality has generally been measured in higher education in three ways: resources, reputation, and value-added (Nordvall & Braxton, 1996). Higher education institutions, as they were established in the United States, followed a model which emphasized academic disciplines and research (Lohmann, 2004), and the perceived quality of an institution was based on success in these areas (Astin & Antonio, 2012; Deming, 1982; Glassick, Huber, & Maeroff, 1997). Indeed, Deming (1986) argued that “the only operational definition of knowledge requisite for teaching is research. … Publication of original research in reputable journals is an index of achievement. This is an imperfect measure, but none better has been found” (p. 173).

Quality also has been judged by resources available to institutions (Abate, Stamatakis, & Haggett, 2003; Astin & Antonio, 2012; Bergquist & Pawlak, 2008), and by the number of faculty and students at the institution (Abate, Stamatakis, & Haggett, 2003). Indeed, definitions of a quality higher education institution vary depending on activities (Wolverton, 1994), stakeholder expectations (Harvey & Green, 1993;
Koslowski, 2006; Watty, 2005), and variations in when and how quality is measured (Astin & Antonio, 2012; Houston, 2008). Quality also has been perceived as being satisfaction for customers or stakeholders (Juran & Defeo, 2010).

Perception of quality is important to institutions’ success. Perception of quality in relation to programmatic accreditation can play a role in state’s granting authority for institutions to operate (Ewell, Boeke, & Zis, 2010). Perceived institutional quality has also been indicated by voluntary public ranking systems (“About VSA,” 2011; Stake, Contreras, & Arbescu, 2012), and consumer publications (Astin & Antonio, 2012) to help consumers choose institutions. Some have suggested that quality be measured by the value added to students (Astin & Antonio, 2012; Liu, 2011), while others have found it linked to inputs such as faculty credentials or activities such as graduation rates (American Council on Education, 2004). Other non-governmental organizations have instituted quality ranking and award systems to help determine quality (Council for Higher Education Accreditation, 2012; NIST, 2012a).

In academia, quality has been defined as a measure of effectiveness and by the activities undertaken to ensure these (Wolverton, 1994). Another definition comes from stakeholders’ expectations of what comprises a quality institution (Koslowski, 2006). The definition of quality in higher education has varied depending on purpose and audience, and this is complicated by disagreements as to when and how quality should be measured (Houston, 2008). Harvey and Green (1993) conducted a thorough examination of the nature of quality in higher education in the United Kingdom and described the various ways in which quality is perceived. They noted that “the traditional notion of quality does not offer benchmarks against which to measure quality” (p. 11) and moving
forward, higher education should seek to understand these varied ideas. Nevertheless, they assert that a lack of clarity around understanding the term does not remove the responsibility of working toward it (Harvey & Green, 1993).

In an effort to define and report quality to stakeholders, the Council for Higher Education Accreditation (CHEA) recently formed an International Quality Group to address issues of quality and quality assurance, including defining the term quality within the global domain of higher education (CHEA, 2012). For the public, the primary measurements of quality in the United States have been public ranking systems, such as the annual ranking of colleges and universities by the *U.S. News and World Report*. These types of rankings, however, do not serve management or public needs as they are not the result of continuous improvement or quality processes (Stake, Contreras, & Arbescu, 2012). Other organizations have created reports and reporting systems in an effort to provide data to students. One example is The Voluntary System of Accountability (VSA) developed by public, four-year universities in the United States to provide information to potential undergraduate college students and their parents (“About VSA,” 2011). Another quality initiative in higher education is the Baldrige Award process created to help organizations improve their performance (NIST, 2012b). As of 2011, only two colleges or universities, however, had been granted the award (NIST, 2011). One argument against the Baldrige is that its focus is on conformity (Houston, 2008).

**Accountability in Higher Education**

As questions about quality surfaced, organizations connected to higher education oversight created accountability systems for measuring institutional improvement and
success. Indeed, the push toward accountability has begun to infiltrate traditional accrediting and oversight bodies which had previously been resistant to calls for accountability, including the Association of Public and Land-grant Universities, American Association of State Colleges and Universities, and the Association of American Colleges and Universities (Carey, 2007). The American Association of University Professors (AAUP) has also begun to consider the roles quality, assessment, and accountability have in higher education (Weiner, 2009). Changes in state funding models, including performance-based funding, are one such form of accountability and reporting.

The perception of accountability differs widely as demonstrated by the varied definitions. In general, though, these definitions emphasize reporting, regulation, and oversight rather than accountability as a vehicle for change and institutional improvement. Accountability has been defined from the view that institutions have a responsibility to others in their reporting (Trow, 1996), and it has been defined as “answerability for performance” (Romzek, 2000, p. 22). Accountability is also a method of regulation and helps to establish legitimacy (Trow, 1996). For some institutions, being accountable has also meant simply reporting current activities to satisfy stakeholders rather than initiating change or reform; in this case, accountability could be defined as reporting (Huisman & Currie, 2004). The American Council on Education (2004) does link assessment to accountability and defines it as publically-presented evidence.

Burke (2005) defined accountability by the behaviors necessary for institutions. He argued that for administrators and leaders in organizations, including higher education, to be accountable, they must use powers properly, focus on mission and
priorities, report performance, be efficient and effective, provide quality assurance, and serve the public need. Higher education has a unique challenge because it must balance its autonomy, necessary for its service to the public, with the need for accountability to the very public it is charged with serving (Burke, 2005). Carey (2007) also emphasized higher education’s responsibility to the public, and defined accountability as “just responsibility— to the students whom colleges educate, to the governments that provide funding, to society at large. Responsibility creates obligation and limits freedom, but at its best it also creates mutual, cooperative relationships. Lack of responsibility, by contrast, loosens bonds and degrades commitment” (p. 29).

Although some accountability systems have emphasized reporting, there is no consistent data collection or reporting method that can be used by stakeholders to determine whether individual institutions deliver an effective product to students. One method proposed has been a value-added model. The Voluntary System of Accountability has proposed such a model which would be measured using three standardized tests (Liu, 2011). Liu (2011), however, proposed a value-added assessment model different from VSA. In examining value-added models, Liu (2011) concluded that the valuation of effectiveness of each institution varies significantly depending on which model is used to determine effectiveness. Institutions and accrediting bodies, should they require value-added assessment, must be sure the methods are accurate and fair.

Another approach to defining quality and demonstrating accountability has been through performance-based funding models. State governing bodies are also now taking on more of a role of ensuring quality in higher education. Alexander (2000) suggested that the relationship between states and higher education has changed; since the 1990s,
states are demanding that higher education play a role in improving the economies of the states as their “principal economic engine” (p. 412). In response to this change, some states instituted performance-based incentive funding for state-funded public higher education systems to provide incentives to improve quality, assessment practices, and reporting. Tennessee was the first state to initiate such a funding plan, and others have tried such models, including Connecticut, North Dakota, South Dakota, Virginia and Kentucky (Blake, 2006; Johnson, 2006; Kupchella, 2006; Martinez, 2006; Moore, 2006; Noland, 2006).

This type of funding, however, has had limited impact on improving the quality of education for students. Carey (2007) argued that these performance models have not led to real improvement, largely because the stakes were low and performance-based funding was extra and was vulnerable to reduction during times of budget stress. To examine the effectiveness of state-based performance funding, Shin (2010) analyzed Integrated Postsecondary Education Data System (IPEDS) data on 467 public institutions from states where performance-based funding and budgeting models were used. The purpose of the study was to determine the effect these state accountability policies had on performance. Within this group, he also examined data from the National Science Foundation for 123 public research universities to determine research performance. Performance was determined by teaching, as measured by graduation rate, and research, as determined by the amount of federally-funded research each institution had. He found that these accountability measures did not lead to any significant changes in the performance of the institutions in the areas of graduation rates and research. Instead, he found that institutional characteristics rather than the accountability measures impacted
these areas. And he found that decreased funding for institutions may have influenced these results; indeed, institutions may not be fully adopting accountability practices because of the lack of incentive to do so by the relatively small amount of money they receive from state funders (Shin, 2010).

There are also no existing, consistently used benchmarks organizations can use to determine whether their inputs (expenditures) are appropriate to their outputs (effectiveness). Powell, Gilleland, and Pearson (2012) conducted a quantitative analysis of two existing national datasets to determine whether a model for predicting efficiency and effectiveness of institutions was valid. They found that expenditures are indeed linked to effectiveness; institutions who overspend in key areas could improve their efficiency by reducing costs, while still remaining effective in key areas such as graduation and retention rates. Their study, along with the one conducted by Liu (2011), highlight the challenge of creating any specific, standardized model for assessing the quality of higher education.

Studies on accountability also highlight the challenge of collecting data about institutions and using this data for comparisons. In one accountability study, independent institutions were excluded because of a lack of state influence (Peterson & Augustine, 2000). A different study included both private and public institutions, citing that all institutions are being held accountable by their stakeholders including the federal government and accrediting agencies (Klein, Kuh, Chun, Hamilton, & Shavelson, 2005), and another study focused on the behaviors of the state legislatures (McLendon, Hearn, & Deaton, 2006). None of the studies evaluated considered only private institutions as many of the calls for accountability are coming from funding sources such as state
legislatures, and private colleges and universities receive funds from governmental bodies only indirectly. This inconsistency among studies, as to the types of institutions to be studied, highlights the complexity of collecting and using data about institutions of higher education. Two of the studies examined (Klein et al., 2005; Peterson et al., 2000) focused on student learning outcomes, one focused on how measurement should take place (Achtemeier & Simpson, 2005), and one addressed the role of academic departments in accountability (Burke, 2005). None addressed how improvement might be achieved based on the information gathered.

There is also no assurance accountability measures will lead to improved institutional quality. Huisman and Currie (2004) explored the concept of accountability and examined accountability practices at four institutions, one each in Norway, France, the Netherlands, and the United States, developed through interviews with academics and leaders at each. They focused specifically on the answers to three questions although they asked about accountability mechanisms such as student-related data, annual reports, performance evaluations, student evaluations, classroom observations, research production (articles, grants and conferences), promotion and tenure processes, and reward systems. From their data, they concluded “despite growing attention to accountability at the national level, at the shop-floor level staff members are to some extent cynical about the ability of current accountability mechanisms to improve quality” (p. 530). All four institutions had a link to government funding or oversight, and each experienced outside pressures for quality improvement and reporting; each also had varying degrees of autonomy. The researchers found that more than half of the respondents (56%) at Boston College, the U.S. university, reported that accountability practices did not lead to any
improvement. The research confirmed Romzek’s (2000) findings of four types of accountability. The authors concluded that most of the accountability measures in place were intended to count existing activities rather than initiate any improvement or reform. They were done mainly to satisfy stakeholders and those who had asked for accountability measures. Ultimately, the impact of these accountability measures in any of the institutions was negligible.

Organizational culture and structure are factors in accountability efforts. Wong and Tierney (2001) conducted an ethnographic study by interviewing 33 members of an innovative higher education institution chartered by a state university. Participants included faculty, administrators, and department chairs; the authors also conducted observations and document analysis. The purpose of the study was to examine the link between organizational change, innovation, and faculty engagement. They also wanted to determine whether the charter created a higher level of accountability. Wong and Tierney (2001) found that the collaboration and accountability were important, but change challenged participants’ identities and created tensions between traditional and new relationships and governance and evaluation structures. Both structure and culture are important elements for creating change. “The lesson to be learned here is how the careful attention to the structure and culture of one’s organization can help create the conditions for meaningful change, which will in turn enable faculty to be more innovative and to be more accountable to multiple constituencies” (p. 1100).

**Assessment in Higher Education**

One of the ways institutions have responded to the increase in accountability is through assessment, either of the institution or its programs, curriculum, or student
learning outcomes. Weiner (2009) posited there are fifteen elements necessary for what she calls a “culture of assessment” as part of the accrediting process (para. 1). One of the critical pieces is an ongoing assessment of general education, which she argued are the core knowledge pieces most institutions emphasize, including communication, quantitative reasoning, critical thinking, and information literacy. The other fourteen principles are: common use of assessment terms; faculty ownership; professional development; administrative support; a realistic, sustainable plan; systematic assessment; learning outcomes for students; comprehensive program review; assessment of co-curricular activities; institutional effectiveness; information sharing; planning and budgeting; celebration of success; and new initiatives. Faculty are a second critical piece of assessment; without faculty support, assessment is not likely to be successful. Weiner described faculty as “the real energy for program implementation” (para. 8), and because of this, institutions must be committed to ongoing professional development for faculty around assessment. She claimed that most institutions will have only some of the elements in place, but all should be working toward all of them.

Ewell (2008, 2009) identified two models of assessment within higher education. He noted that one model, focused on accountability, has an external position and is used for compliance and results. This evidence is largely quantitative in nature and is very standardized. Assessment for improvement, however, relies on quantitative and qualitative data, is focused inward, and emphasizes engagement. Rather than reporting, the model for assessment for improvement relies on multiple feedback loops and reference points over time, is comparative, and has specific goals in mind. The instruments to collect this data are multiple and less standardized (Ewell, 2008; 2009).
Assessment within higher education takes place across the institution; some of these assessments are used for improvement. Peterson and Augustine (2000) surveyed 885 public higher education institutions to determine how student assessments were being used in response to internal and external pressures from state accrediting bodies and institutional needs for reporting. They were concerned with aspects of (a) institutional type; (b) institutional dynamics; (c) state characteristics; (d) accrediting region; (e) the influence of the institution, accrediting bodies, and state; and (f) cognitive assessment. They found that the greatest factor influencing assessment was the internal dynamics of the institution and institutional type rather than any external influence such as accrediting body or governmental pressure. Their study highlights the need to understand internal institutional influences as well as institutional type.

Abate, Stamatakis, and Haggett (2003) identified multiple characteristics and principles which should be considered by departments in adjusting curriculum as an area of assessment. From their review of literature, the authors proposed behaviors necessary for assessment of programs specifically related to pharmaceutical education framed by aspects of learning organizations. The authors noted a shift from input-based evaluation to outcomes and argued for specific areas to be addressed to ensure program review as an aspect of institutional effectiveness and improvement. They also asserted that assessment should focus on curriculum development, including student learning outcomes and instruction, and program assessment. Indeed, Abate et al. (2003) argued that faculty can be proactive in assessment by participating in the evaluation of curriculum and programs and thus drive improved performance within the institution. This would bring higher
education institutions closer to demonstrating aspects of a learning organization such as measurement and application of what is learned.

Peterson, Wittstrom, and Smith (2011) also looked at curriculum and the importance curriculum assessment plays in accreditation processes. The authors reported on a process to develop an assessment plan for their curriculum to ensure that what had been planned for the curriculum was actually being delivered. The authors acknowledged that assessment was intended to drive course improvement. For the assessment, the authors made a comparison of the planned with the delivered curriculum and used a committee review process to evaluate the courses. The purpose of the formal assessment process was to identify areas where courses could be improved. This report highlights the role departments and programs play in assessment for institutional improvement.

Astin and Antonio (2012) also looked at the role assessment plays in institutional improvement. The authors argued that the “proper use of assessment data has one primary objective: to stimulate actions that will ultimately enhance the talent development process” (p. 139). They noted that assessment can refer to either the gathering of information or the use of it for improvement, and there is a difference between these two purposes. The authors also stated that institutions should focus on student assessment, arguing that the use of other assessment tools within the institution is dependent upon effective student assessment. Within institutions, the authors noted two wide areas of current assessment efforts: students and faculty. Students are assessed for admissions, placement, grading, credentialing and certification and faculty are assessed for performance. These types of assessments should be tied to efforts for institutional
Klemic and Lovero (2011) also found student assessment to be tied to improvement efforts. The authors used Senge’s (1990a) theories of learning organizations to evaluate student performance in a specific department within the College of Business at a private Catholic institution in Illinois. As part of their push for AQIP accreditation from their regional accrediting body, they used quantitative and qualitative research methods to determine student learning, measured upon beginning and ending the program to determine what value was added to the student. The purpose of the assessment was to make curricular adjustments as needed. The assessment of learning was based on a paper in the initial course and a project in the final course. The results demonstrated student learning but they did identify some system-wide issues as part of “double-loop learning” as discussed by Senge (1990a). Based on the data, the department made changes to improve student learning.

Faculty assessment has also been used as a measure of quality and method of assessing quality and performance. In the area of academics, assessment within higher education has been focused in four areas: faculty performance, student learning outcomes, program assessment, and curriculum assessment. General assessment of institutions may come through institutional accreditation, program accreditation, governmental oversight, or from funders or grantors. Castiglia and Turi (2011) recognized that a tension exists in higher education as to the use of assessment. They argued that if assessment is for improvement, then it must be designed to discover flaws so these issues can be addressed. If, however, assessment is designed for accountability, then data will be used to reflect positively on the institution for the public, especially
students who may use the data to make decisions about attending a college. Assessment for improvement should be reported internally for future adjustment, while data to prove or support quality demonstrates current conditions (Castiglia & Turi, 2011).

Ewell, Paulson, and Kinzie (2011) also looked at faculty and conducted a study of faculty and department chairs who had been identified by their academic officers as being knowledgeable about assessment. The sample for the study was randomly selected programs at all regionally accredited institutions in the United States (n=2,719); the response rate was 30%. The questionnaire focused on student learning outcomes at the departmental level, noting that it is at this level of daily work where change is taking place, and faculty work is the domain of department and program leaders. The researchers posited that, at this level, faculty and staff are also in the place to enact the greatest change. The study focused on the methods institutions use to determine learning outcomes, including testing, surveys, portfolios, rubrics, and capstone projects and focused only on student learning outcomes assessment. The researchers found that faculty member’s desire to improve programs was the greatest impetus for assessment rather than external forces such as accreditation. They also found that the results were used primarily for program review, instructional improvement, and accrediting purposes, and changes in the areas of curriculum, instruction, and assessment following the use of the assessments. Only a third of the respondents used the results to evaluate faculty. Responses differed by discipline which may be affected by whether or not the program was accredited. Education, health science, computer science and engineering reported the most assessment, while arts and humanities, natural sciences and social science reported a lower volume of assessment activity (Ewell et al., 2011).
Ewell et al (2011) also wanted to see to what extent these responses differed from those of the academic officers who had been surveyed in 2009. The researchers found “there is considerable assessment activity at the program level” and “perceptions of program heads differ from chief academic officers in terms of the challenges that must be addressed to advance assessment on campus” (p. 5). A major conclusion of the study was that there is a vast difference between what chief academic leaders know and believe about assessment and what is happening at the departmental level. There is also a difference in perceptions between program and department leaders and chief academic officers based on a previous study conducted in 2009. The 2011 study was a follow-up to that one (Ewell et al., 2011).

Although all of this assessment is taking place within higher education, Kuh and Ikenberry (2009) argued that institutions “must become smarter and better at assessing student learning outcomes; at using the data to inform resource allocation and other decisions; and at communicating these responsible, mission-relevant actions to their constituents” (p. 3). True accountability reforms must truly be aligned with leaders’ desire for change and performance measurement processes; otherwise, the reforms are not likely to be successful (Romzek, 2000). Learning organization theory is one way in which institutions can create the structure and organizational culture to create an environment conducive to change.

**Learning Organization Theory**

This section provides a more detailed examination of the four theories of learning organizations proposed in the conceptual framework. This review of literature provides a foundation for understanding how the principles within my study were developed and
how these principles and others have been used in studies to understand the presence of these principles in various types of organizations. This section also includes some arguments against learning organizations.

**Theory**

The concept of a learning organization was first brought forward by Argyris (1977). He argued that organizations were adept at single-loop learning, which involves recognizing an issue and working to resolve it, but were not engaging in the necessary double-loop learning. Institutions need to not only look at the current problem or issue, but also examine the underlying assumptions and processes which guides decision-making and problem-solving.

Building on Argyris, Senge (1990a) proposed five “disciplines” of a learning organization: personal mastery, mental models, building shared vision, systems thinking, and team learning. A main aspect of Senge’s (1990a) concept of a learning organization is systems thinking. Systems thinking is seeing the components of an organization as part of the whole and thinking about how the parts work together. Another important element is personal mastery, “the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively” (p. 7). The mental models of employees are images so deeply embedded within the organization that no specific management strategy can undo them. These models can be formed by deeply-held beliefs, assumptions, generalizations, pictures, images, or ideas that influence individual’s behaviors and understanding of the environment around them. A challenge to mental models is the shared vision of the organization which Senge called the “common identity and sense of destiny” within the
organization (p. 9). Having a shared vision encourages commitment of employees rather than simple compliance to orders given. A shared vision cannot be accomplished by completing a simple vision statement. In an organization with a shared vision, individuals learn because they desire to, not because they are compelled to do so by management. The final discipline of team learning hinges on the idea that teams are stronger than individuals; teams take individuals beyond where they would have gone had they tried to be successful on their own. Teams are the building blocks of organizations, and it is the interactions of team members that can help organizations grow stronger (Senge, 1990a).

Senge (1990a) argued that for organizations to be successful, learning must take place throughout the organization and not only at the executive levels. Becoming a learning organization gives work more value to the human beings within it because human beings enjoy learning, and employees not at the top level often understand what is needed within the organization. Seeking input from all levels gives employees value. It also gives the organization a competitive edge within the market and provides increased ability to compete in a global environment (Senge, 1990a).

The initial interest in Senge’s (1990a) learning organization theory and application came from industry and was focused on how these could be used to garner increased profitability through improvement in quality. The author noted that Total Quality Management was the “first wave” in building a learning organization because of its focus on experimentation and feedback (Senge, 1990b, p. 8). He noted the shift from standardization and increased production to trying to use quality measures to anticipate customer needs and meet them. This moves organizations from a place of reacting and
responding to the market to anticipating market direction and controlling manufacturing in such a way as to drive customer needs, to find the “‘latent need’ of the consumer - what customers might truly value but have never experienced or would never think to ask for” (Senge, 1990b, p. 8). Senge (1990b) noted that this ability to anticipate rather than react was the difference between adaptive and generative learning.

Lei, McGill and Slocum (1992) added to Senge’s (1990b) definition of adaptive and generative learning by operationalizing both definitions to industry. The authors defined adaptive learning as focusing on “solving problems in the present without examining the appropriateness of current learning behaviors” (para. 2). They argued that the changing global market at that time created the environment in which organizations had to adapt quickly and use generative learning; however, at that time, many organizations remained in this adaptive mode. In contrast to others’ emphasis on what is necessary for generative learning, the authors focused on the characteristics of an organization stuck in adaptive mode. They are: (a) making only incremental change or improvement; (b) focusing on previous successes rather than current needs; (c) responding to stimuli rather than planning; (d) reacting to change in a fixed way, without addressing problems at their face; (e) avoiding risk and engaging in behaviors that are routine or seek to conform; and (f) possessing an organizational structure that reflects more of its historical success than its need to move forward and succeed in the future. According to Lei et al., “Adaptive organizations change, but only within narrowly defined ranges” (para. 5). These organizations are easily identified by their decline in the market from a once supreme position. The authors argued that adaptive institutions can be successful as long as the competitive market remains static; when the market changes, adaptive organizations are
unable to compete. Although the emphasis on this article was on industry, the definition of adaptive learning in this case reflects the historical perspective many higher education institutions have. They have failed to adapt to the changing market; instead, they rely on reputation and historical data.

Senge (1990b), recognizing the link between learning organizations and the quality movement, highlighted behaviors leaders in learning organizations must have. To be successful, leaders also must be designers, teachers, and stewards. He identified the key aspect of a designer as having the structures in place to permit learning and to engage people at all levels of the organization, not just at top leadership. Leaders as designers must also develop effective processes. As teachers, they must help everyone within the organization understand the current reality at three levels: system, behavior, and events. Leaders must also be stewards through their impact on the individuals they lead; they must help everyone see their mental models and assumptions and teach individuals to see system structure and not just individual events. Ultimately, leaders in learning organizations lead by example (Senge, 1990b).

Building on Senge’s work, Garvin (1993) defined a learning organization as “an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (p. 80). However, he challenged Senge’s (1990a) work on learning organizations, arguing that it was far too abstract to be useful to organizations because the principles lacked specific practices, guidelines, or measurements. Garvin (1994) stated that overall clarity around the definition was necessary for a practical purpose. He posited a definition that combined both the need for new ideas and a change in the way individuals perform their work. Ultimately, learning
organizations are organizations that are “adept at translating new knowledge into new ways of behaving” and “manage the learning process to ensure that it occurs by design rather than by chance” (Garvin, 1994, p. 20). He argued that without learning, organizations continually repeat old behavior, and he proposed three specific steps and five specific behaviors for learning organizations (Garvin, 1994).

Garvin (1994) posited that there were three steps for organizational learning and that this learning is evident in the overlapping function of the steps. The first step is one of knowledge in which members of the group are exposed to new information and ways of thinking. The second step is internalization of the information and changes in behavior. The final step involves the use of information and behaviors to make change and improve performance with an emphasis on results. Any evaluation of a learning organization must involve an examination of all three aspects (Garvin, 1994).

Garvin (1994) argued that learning organizations are generally good at five specific activities: (a) a consistent, systematic way of solving problems reliant upon data; (b) an experimental process for discovering and evaluating knowledge; (c) use of prior experience; (d) use of others’ knowledge and experiences, including establishing benchmarks; and (e) sharing knowledge throughout and among all components of the organization often through reports, site tours, training, and cross-training. A learning organization is characterized by using information to change behavior, and specific practices and policies are the key to successful change in behaviors (Garvin, 1994). In relation to higher education, Garvin argued that higher education institutions are not learning organizations; they fail this definition. Higher education institutions are good at generating knowledge, he argued, but they are not as successful at using this knowledge
to change practice.

Kline and Saunders (1998) also explored the importance of learning organizations, building upon the work of Senge and Deming. To make the principles of a learning organization more accessible to managers, the authors developed *Ten Steps to a Learning Organization* in 1985 and adapted it until the most recent version in 1998. For the 10 steps, the authors argued that organizations need to: assess current culture, be positive, encourage thinking, reward risk, use people as resources, encourage learning, create and promote a vision, use systems thinking, and put the steps into action. In addition to these 10 steps, they also proposed 16 principles necessary for a learning organization to take place. Leaders should: encourage self-directed learning, use mistakes for continuous learning, continuously redesign systems and structures, have a supportive culture, celebrate learning, celebrate all learners equally, transfer knowledge and power, let learners structure own learning, practice self-evaluation, respect all human intelligence, accept learning preferences, encourage discovery about learning styles, cultivate employees’ abilities, make learning logical and fun, use dialogue and discussion to build ideas, and examine everything. To help individuals and organizations assess their current culture and willingness to learn, the authors developed an assessment. The authors have used this assessment as a diagnostic to determine how to help organizations.

The authors also argued that for quality principles to take hold there must be Integrative Learning at all levels of the organization. The use of learning organizations helps institutions to harness the knowledge of its people to work toward continuous improvement. A specific culture must also exist for TQM or other quality principles to work, and the authors argued that that culture can be developed by building the principles
of a learning organization (Kline & Saunders, 1998).

Drawing on the work of Senge and Garvin, Dill (1999) recognized the need to examine learning organization theory as it applied specifically to higher education. He applied Garvin’s (1993) theory of learning organizations as a framework to determine whether quality assurance changes within 12 universities could be used to identify and define specific characteristics that comprise an academic learning organization. From this study, he found consistent activities among higher education and proposed six specific behaviors institutions must have to be an academic learning organization. Overall, the author reported that institutions are adapting to an environment that is demanding greater accountability. Although the methods used might be unique to academic institutions, they still demonstrate aspects of an academic learning organization.

The specific behaviors identified by Dill (1999) in his study of academic organizations are: (a) systematic problem solving through observation of processes, review of data, and use of continuous improvement processes; (b) learning from one’s self; (c) learning from others from the review of these processes to establish best practices; (d) implementing new approaches; (e) sharing knowledge with others; and (f) measuring the learning that has taken place to determine true behavioral change. Dill found some consistent behaviors among the institutions: (a) evidence-based decision-making; (b) increased collaboration among academic groups, including through structural changes and design; (c) making use of knowledge and information from others; (d) coordination at the institutional level for systematic improvement; and (e) sharing knowledge about best practices especially between groups within the institutions.
Learning Organization Studies in Non-Academic Settings

Marsick and Watkins (2003; Watkins & Marsick, 1997) developed an instrument that could be used by organizations to evaluate their current situation and used by researchers for measurement. The purpose of the questionnaire was to help establish the link between organizational learning and the institution’s knowledge and financial performance. Their ideas derive from a human resource development perspective. They believed HRD was in the position to have an impact in this area and that a tool which assessed learning organization principles could be used by organizations to drive change. The primary purpose of the Dimensions of the Learning Organization Questionnaire (DLOQ) was to help individuals and organizations assess their current situation and identify areas for growth. Previous instruments had not been derived from research; rather they were drawn from practice (Marsick & Watkins, 2003).

Several studies were subsequently conducted to validate the instrument. Yang (2003) concluded that the DLOQ could be used to determine whether an organization possessed a learning culture and if this culture was linked to performance within the organization. Yang, Watkins, and Marsick (2004) conducted additional measurements on the construct validity that confirmed the validity of the seven factors of the questionnaire, although the correlation between specific factors and performance indicators could be stronger. Ultimately, the authors encouraged additional studies to establish relationships between learning organization constructs and various organizational cultures and performance indicators.

Others have applied the DLOQ to various situations in business and higher education. Several have used the DLOQ as a way of assessing performance specifically
in two areas: knowledge and performance. The DLOQ has largely been used to affirm or question whether learning organization practices are linked to these two areas with an assumption that, by increasing learning organization qualities, organizations can improve learning and profit. Ellinger, Ellinger, Yang, and Howton (2002) used Watkins and Marsick’s (1997) version of the DLOQ and their concept of the learning organization to evaluate the link between learning organization principles and knowledge and financial performance. Additionally, the authors looked at the link between the principles and four additional measures of financial performance. The questionnaire was completed by 208 mid-level managers in manufacturing in the United States. The authors found a positive correlation between financial performance and learning organization behaviors, suggesting that “there is a payoff for organizations that embrace practices and strategies consistent with the learning organization literature” (Ellinger et al., 2002, p. 17).

Birdthistle (2008) applied the conceptual frame used to develop the DLOQ to examine whether small businesses (fewer than 250 employees) in Ireland could be considered learning organizations; she found that size and structure were factors. Extremely small businesses had neither the number of employees nor formal structure necessary for learning organizations, while medium and larger small businesses had the presence of some of the learning organization characteristics, although they also lacked the formal structure necessary for all principles to be present. His study suggests that measurements of learning organization principles should consider organizational size and culture as factors in considering whether a group can be called a learning organization.

Other types of organizations have also been studied. Jamali, Sidani, and Zouein (2009) used a modified version of the DLOQ to assess whether learning organization
behaviors, as defined by Marsick and Watkins, were present in banking and IT organizations. The questionnaire was modified to remove questions related to improvement, as they were interested only in a snapshot of the current reality. The authors surveyed 227 individuals from 12 different organizations (six from each type) in Lebanon; 123 were managers, while 83 were employees. Following the survey, four interviews of Human Resource managers were conducted. The authors found IT companies were more closely aligned with the principles of a learning organization. The authors also posited that the differences in the cultures of each type of organization were aligned with the strengths and weaknesses on the questionnaire. Their study adds to the discussion of understanding organizations in various contexts and organizational cultures.

Weldy and Gillis (2010) also gathered the perceptions of managers and employees at different types of organizations. In their study, the authors surveyed 143 managers, supervisors, and employees from four companies (two service, two manufacturing) to determine whether differences existed across these various levels using the DLOQ. The authors wanted to look at all levels because a true learning organization requires commitment across the organization; the absence of the factors at various levels could keep the organization from developing into a learning organization. The researchers found that the person’s level within the organization was a factor in the individual’s perception of both the company as a learning organization and the company’s overall performance. Managers and supervisors tended to perceive the organization to be closer to a learning organization in knowledge while employees did not. Managers also were more likely than employees or supervisors to perceive the financial performance of the organization to be higher. The researchers also found differences between the types of
organizations. Their study affirms the need to continue to gather information on various types of organizations and among the levels within them, as no two organizational types move toward a learning organization in the same way.

A different study looks at managers from various levels of a police organization. Filstad and Gottschalk (2011) examined 65 police managers within two districts of the single integrated police force in Norway. A questionnaire was used to determine the link between traditional police values, leadership values, and the principles of a learning organization. The researchers found that only two of the values, informality and equality/empowerment, were correlated to learning organization values. One interesting finding was the level of neutrality the managers had around police values, leading the researchers to conclude that the managers were not aware of the values espoused within the organization.

Hunter-Johnson and Closson (2012) also looked at police organizations. The researchers used a subset of Watkins and Marsick’s (1997) DLOQ to examine whether adult learning educators in a Caribbean police system perceived their units to be learning organizations. The authors distributed the questionnaire to a convenience sample of 29 instructors. The responses revealed that most of the instructors did not perceive their academic organization to be a learning organization. The use of the convenience sample and the analysis of similar individuals at the same level within the organization make the use of the results of this questionnaire difficult to compare with other types of organizations. However, their study provides support for looking at individuals at various levels for multiple perspectives and experiences within the organization.
Another study shows the importance of examining various levels within a hierarchical system. Stothard, Talbot, Drobnjak and Fischer (2013) modified the DLOQ (Marsick & Watkins, 1997) and another instrument for a military context. The authors wanted to look at the presence of learning organization principles within brigades and headquarters of the Australian Army. The researchers surveyed a sample of 1,061 respondents (81% from brigades, 19% from headquarters). The authors found that learning cultures differed between the two levels of hierarchy, with alignment along functional behaviors. The rank of the individuals, i.e. their place within the hierarchy, is responsible for most of the differences between individuals’ perception of their units as learning organizations. Individuals will perceive the presence of the principles of a learning organization differently based on their role and function within the hierarchical system (Stothard, Talbot, Drobnjak, & Fischer, 2013).

While the DLOQ has been a popular instrument for evaluating the presence of learning organization principles, other studies have been conducted to create or test frameworks or develop other ways in which to evaluate the presence of these principles. Lei et al. (1992) identified four levels of organizational experience: those of the external world, the manager’s own experiences and actions, and “the organizational consciousness—the experience of all of the above” (para. 21). Adaptive learners, according to the authors, work at only one level at a time, while generative learners can see all dimensions. The authors defined generative behaviors as openness, creativity, systemic thinking, personal efficacy, and empathy.

Griego, Geroy, and Wright (2000) focused on human resource development and examined whether specific behaviors could be used as predictors of the presence of a
learning organization. Using an existing questionnaire, the authors surveyed 48 students in a master’s level human resources education program. The goal of the authors was to establish some practical application of learning organization theory. They identified five specific areas relevant to human resource professionals that would indicate the presence of a learning organization: training and education, rewards and recognition, information flow, vision and strategy, and individual and team development. Individuals who identified rewards and training as present in their organizations were most likely to identify their work unit as a learning organization.

Bui and Baruch (2010) also produced a conceptual framework developed on an inputs-process-outputs model built on Senge’s (1990a) five disciplines; the model was constructed from extant literature on each of the five disciplines and management literature. The researchers offered a unique perspective on evaluating the presence of learning organization behaviors by looking at both preceding activities and expected outcomes to make the theory more measurable and usable. The authors expect the framework to be usable for academics for study and for managers to create learning organization environments. The researchers created a similar framework for use in higher education (Bui & Baruch, 2012).

**Criticism of Learning Organization Theory**

There is some disagreement as to whether learning organizations are present in higher education. In relation to higher education, Garvin (1994) argued that higher education institutions are not learning organizations because, while they are good at generating knowledge, they are not as successful at using this knowledge to change practice. Dill (1999) agreed, although he argued that accountability movements had
within them underlying assumptions about quality improvement practices which reflected
the actions of a learning organization. There is an expectation that professors could use
appropriate measurements to determine quality, processes could be put into place for
knowledge sharing, and knowledge could be used to improve student learning and
teaching (Dill, 1999). Abate, Stamatakis, and Haggett (2003) argued that higher
education had not been successful at showing learning organization qualities such as
measurement, double-learning learning, prioritization, and using information to guide
improvement, even after several decades of assessments of student learning and
curriculum (p. 480).

Some individuals question the effectiveness, relevance, or usefulness of learning
organizations or learning organization theory. In fact, The Learning Organization journal
recently dedicated a special issue in its 15th year of publication to the view of the learning
organization as a concept. In a guest editorial, Smith (2008) recognized the persistence
of learning organization ideals in its theory and practical applications but argued that
learning organizations are too vague and are difficult to implement. He argued that
individuals struggle with systems thinking which is integral to understanding the learning
organization. In his years as a practitioner, Smith (2008) had observed only limited
success with learning organization projects. Finally, others who had previously
embraced learning organizations were moving away from them because of the ambiguous
nature of the theory and the overall lack of success with implementing it. For the future,
he encouraged organizations to expand beyond the limits of the learning organization
theory as anything rigidly defined by prior authors or experiences (Smith, 2008).
In the same issue, *The Learning Organization* journal featured another critic of the learning organization idea. Grieves (2008) conducted a review of literature to determine the relevance of the learning organization concept. The author argued that the concept is an “ideal” (p. 464); it is a model but not something most organizations can achieve. In fact, for the author, a model is something that is inflexible which is contrary to the learning organization idea. He also questioned the theoretical concepts on which the theory is based. Grieves (2008) challenged Senge’s (1990a) five disciplines as “little more than aphorisms designed to put a structure around the systems dynamics” (p. 468); he also called it “naive” (p. 470). In general, the concept fails to acknowledge the political nature of organizations; each member of the organization, from manager to employee, has his or her own agenda and interests to protect. Organizations are also not democracies; actions and decisions favor the interests of the owners. The author suggested the idea be abandoned as “an impracticable and unobtainable myth” (p. 472).

Senge (1996) himself recognized the difficulty inherent in creating an organization with an ability to change and grow as learning organizations are proposed to do. He conceded that “There are no simple causes and no simple fixes for societal or organizational challenges” (p. 37). This statement addresses criticisms that the idea of a learning organization is simply yet another “quick fix” management idea. He also acknowledged that developing a learning organization takes time, energy, and deliberate and intentional transformation within leadership and the people within organizations. This is no small feat. For Senge (1996), “significant change will require imagination, perseverance, dialogue, deep caring and a willingness to change on the part of millions of
people. I believe it is also the challenge posed in building learning organizations” (p. 37). His use of the word *challenge* concedes the difficulty of the overall theory.

Another criticism has been of the vagueness of the overall concept. Örtenblad (2002) argued that the definition of a learning organization is too vague. He pointed out the inconsistency in definitions of the learning organization. Many have tried to define the term, but it has caused confusion rather than agreement. Some of the variation depends upon whether the definition comes from a practitioner or a researcher. Consensus around the term would make it more useful. Jamali, Sidani, and Zouein (2009) conducted a literature review to identify all of the measurements used to identify learning organizations. They identified seven instruments with various constructs identified as factors for creating a learning organization environment. Grieves (2008) argued that the very presence of so many assessments, relative to the environment in which they will be used and constructed using diverse behaviors, demonstrated the lack of understanding of the components necessary for a learning organization. The lack of understanding of what a learning organization really looks like is part of the reason for so many assessments (Grieves, 2008).

Fenwick (1997) challenged some of the basic concepts underlying learning organization theory. For one, she argued that the idea of continuous learning on the part of employees puts them forever in a position of deficit; that is, the employees can never be in a position of authority in terms of learning. Also, learning organization theory tends to leave out frontline workers whose positions may not be perceived as knowledge-based. In this way, learning organization theory can be dehumanizing and encourage workers to be perceived as commodities. In addition, the theory does not recognize other
issues which may affect learning such as class, gender, race or learning differences. She also objected to production as being the criteria by which learning is measured in many organizations. This reinforces the commodification of the employee. Overall, she objected to the notion that learning for the organization means that management rather than the employee determines what learning needs to take place (Fenwick, 1997).

Dymock and McCarthy (2006) found similar concerns to Fenwick (1997) in that learning organization theory can be imposed in a mechanistic way on employees. In a mixed methods study of one manufacturing company, the authors found that, while employees recognized the organization’s commitment to learning, many employees felt that learning was in place only as a way for the organization to remain competitive with other companies. The company “made no secret of the fact that it expected its workers to be learners for the sake of the organization, and those who would not were encouraged to move on” (p. 535). Individuals within the organization participated in trainings up to the level at which they were satisfied with being promoted, but not beyond and not simply for the sake of learning. In this way, learning organization theory was an explicit management tactic rather than deriving from values embedded within the organization’s culture. For the researchers, this confirmed earlier arguments that learning organization theory is more about corporate benefit than individual worker development.

Caldwell (2012) also criticized the leader-centered aspects of the learning organization concept. For him, Senge’s (1990a) theory never reaches its ideal because it is leadership who has the power and authority to drive learning and change. He argued the concept assigns the power to create such an organization with the leadership, although it is shared learning which is supposed to drive change. According to Caldwell (2012),
“the idea of a learning organization only appears to make sense if it is enacted by leaders who have the power, knowledge or expertise to define what learning is, how knowledge is stored and transmitted, and how it is used to steer or set the direction of future learning” (p. 40). In fact, Caldwell (2012) argues that Senge’s ideas simply rework traditional top-down leadership models.

**Learning Organizations in Higher Education**

Learning organization principles have been discussed in the context of higher education. This section discusses the research that has been conducted on various academic units in an effort to understand how learning organization principles are present and used within higher education.

**Research Studies**

Watkins (2005) argued that higher education may be the most difficult type of culture and structure in which to establish a learning organization. To help initiate change in this environment, she proposed that a leader would need to do the following: develop clear goals and objectives, have the right leadership in place, garner faculty support, use varied leadership approaches, create opportunities for teams and build coalitions, maintain a high level of energy, manage problems, expect resistance, and see change as a continuous learning process. This list of behaviors was developed from reviewing literature on change within non-academic settings (Watkins, 2005).

Within higher education, Kumar (2005) surveyed 238 private, non-university colleges in Malaysia to determine the link between the presence of learning organization factors and improvement in knowledge and financial performance. Overall, organizational learning, rather than team or individual learning, showed the strongest
relationship to the two performance indicators and the presence of high organizational learning could be a predictor of future success in financial and knowledge areas.

Kumar and Idris (2006) also used the DLOQ developed by Watkins and Marsick (1997) to survey human resources managers and personnel at private colleges in Malaysia. The purpose of their study was to understand the link between the seven dimensions measured by the DLOQ and knowledge performance. The authors did find evidence of organizational learning based on self-report measures of commitment to research, teaching, and service. The most significant predictors of knowledge management for the institutions were leadership, embedded systems, and team learning. They also found that service and teaching were linked to knowledge performance; however, the age of institution, tenure status, commitment to research and community service, and number of full-time faculty had no significant link to knowledge performance. Their study illustrates the importance of collecting some demographic data to determine whether this information is a factor in how individuals perceive their organizations to be learning organizations.

One study examined two different institutions to determine whether learning organization behaviors were present. Bui and Baruch (2012) created a conceptual framework based on the extant theory focused on Senge’s (1990a) five disciplines to illustrate the inputs, processes, and outputs that would be present in a higher educational system functioning as a learning organization. Using a questionnaire, they conducted a study of 687 employees at two universities, one in the United Kingdom and one in Vietnam; of the respondents, most (64.9%) were academics. The authors found that the UK institution possessed more components of the learning organization, which the
authors attributed to cultural differences and that their model could be used to evaluate higher education environments. The study highlights the need to review various types of institutions within different cultures and to continue to explore the presence of the learning organization in higher education.

Acknowledging the unique culture of higher education is integral to understanding when and how learning organization theory can work within this type of organization. White and Weathersby (2005) argued that higher education institutions lack learning organization principles because of the overall culture of these organizations: “a surprising number of values of academic life are antithetical to the values and ethos of a learning organization community” (p. 294). Higher education institutions compete with one another, are comprised of independent individuals who focus on self-interests, and have rigid hierarchical structures. The authors suggested specific strategies for moving toward learning organization behaviors, including promoting learning organization principles in classrooms and among colleagues and working toward collaboration for change to counteract the culture of discipline-specific divisions.

Staff and faculty within higher education have also been the subject of learning organization research. Khasawneh (2011) examined 202 faculty perceptions of the presence of learning organization principles, as proposed by Senge (1990a), at a university in Jordan. The survey followed efforts by the institution to develop into a learning organization and include more communication with parents and students. For the most part, the faculty rated the presence of all of the disciplines as moderate to high; there were no significant differences between the perceptions based on gender or academic rank. Differences did exist between discipline and length of service to the
University. One criticism of this study is the weak statistical analysis; the author relied only on descriptive statistics and simple ANOVA to answer the research questions (Khasawneh, 2011).

Another study which examined faculty and academic staff was conducted at a public university in Malaysia; the university was selected because it had been undergoing a quality initiative to be more competitive and recruit more students. Ali (2012) conducted a survey of 214 academic staff using the DLOQ and a self-report assessment on academic performance. The study found significant correlations between learning organization principles and academic performance. The presence of leadership provided the highest correlation to performance. The study also showed that variance in teaching and research satisfaction could be explained by the presence of learning organization principles; however, the presence of learning organization principles is more a predictor of research satisfaction than teaching. Overall, the author concluded the faculty felt moderate levels of the principles were present within the university; however, he argued that this level “raised an issue as to whether educational organizations are true learning organizations” despite their dedication to learning (Ali, 2012, p. 75).

Recognizing the various divisions within higher education, some studies have focused on specific subsets of higher education. Borzsony and Hunter (1996) shared their experiences in Scotland using partnerships to help build learning organization principles within one university. The partnership model brought together the community, employers, students, and staff to help make decisions and improve student learning. The authors argued that the partnership model is appropriate for a variety of institutions, despite skeptics who have argued that the success of these endeavors is the exception
rather than the norm. The model, however, requires individuals to create an environment for change. Institutions must have support of leadership, everyone must acknowledge cultural forces at work, and everyone must be willing to learn.

Scott and Dixon (2009) also looked at partnerships as a pathway for institutions to become learning organizations. The authors looked at a university partnership model by conducting a case study of a business school in Australia. The purpose of the study was to see whether a learning organization model improved teaching and learning. The researchers looked at how an organization used five years of students’ self-reported perceptions in the areas of goals, skills, workload, teaching, assessment, and overall student satisfaction to assess programs. Interviews with stakeholders discovered that assessment was tied to maintaining the institution’s reputation. Ultimately, the authors argued that the case study showed institutions should make use of student data, not simply collect it, and that for a learning organization model to be successful, student data must be used in balance with institutional and faculty priorities such as research. Additional studies in which perception data was partnered with assessment data or improvement would be helpful to continue to understand what way learning organization principles can support institutional improvement efforts.

Similar to the partnership model, advisory committees are brought together to give institutions various perspectives for improving programs and increasing student learning. Davis and Davis (2009) examined specific activities of an advisory committee in higher education to determine whether these contributed to the institution toward becoming a learning organization. The authors argued that advisory committees contained all five disciplines as proposed by Senge (1990a) and therefore serve as learning organizations
within higher education. In fact, the authors argued that these learning teams could help to establish the theory within higher educational institutions (Davis & Davis, 2009). While the authors apply Senge’s principles to a breakdown of academic advisory committees, the authors did not actually conduct a study of any advisory group.

Bauman (2005) also looked at student learning. The author conducted a qualitative study of 14 colleges to determine organizational learning around meeting the learning outcomes of historically underrepresented students on the campuses. The project, called the Diversity Scorecard project, asked institutions to examine data around specific questions related to serving African-American and Latino students. This study was based on observation; the purpose was to discover how learning actually takes place by observing it take place, rather than on the results of learning or the way in which it happens. Existing literature about organizational learning is very broad. This study looked at it from a more micro level in light of a specific problem.

Some studies have focused primarily on how aspects of a learning organization are linked to teaching and student learning. In one of these, Collie and Taylor (2004) used a learning organization framework to explore the link between learning organizations and teaching quality. They surveyed 402 department chairs in the same disciplines at 24 doctoral/research level institutions (16 public, 8 private); they received 196 responses (response rate 49%). The study specifically looked at vision, communication, leadership, knowledge, and culture. The authors concluded that the four learning organization constructs were present within academic departments as related to Teaching Improvement. The researchers found that departments with a high level of vision and leadership also had the highest levels in Teaching Improvement. There was also a
positive correlation between Knowledge and Communication Management and Teaching Improvement and Learning Culture and Teaching Improvement. Overall, the study found that “departments’ cultures reflect a stronger individual rather than group orientation. Additionally, the practice of centralized teaching improvement efforts runs counter to the findings about faculty interaction and engagement…efforts for the improvement of teaching should be concentrated at the department level” (p. 147).

In a different study, Ions and Minton (2012) examined whether student projects promoted learning organization behaviors in the organizations in which the students were assigned. The researchers found that, while the project seemed to be aligned well with learning organization principles, students struggled to apply these principles within their organizations (Ions & Minton, 2012).

Several studies have focused specifically on faculty or leadership within academic departments. Holyoke Sturko and Wood (2012) administered a modified DLOQ adjusted specifically for faculty. The questionnaire was sent to 663 faculty at two- and four-year institutions in Idaho and Washington to determine whether academic departments perceived themselves to be learning organizations as measured by the perceptions of faculty. In their study, they did find that gender, rank, and institutional type were factors in whether faculty perceived their departments to be learning organizations. The low response rate (9.9%), along with the limited population, supports the need for additional research on academic units within higher education. The authors examined departments, not colleges, they did not limit their study to general education, and they focused their study on faculty rather than academic deans and chairpersons.
Bak (2012) also examined an academic unit and conducted a case study of one department with a higher education institution in the United Kingdom, using an initial questionnaire followed by semi-structured interviews to determine whether Senge’s (1990a) five principles were present. He found that the respondents did not believe all five characteristics were observed and that at the department level, a learning organization was not created. The respondents included managerial, academic, and administrative staff; there was some difference between academic and administrative staff in their beliefs about the qualities the department held. A concern for this study is that the evaluation of the questionnaire results appeared weak, and there was not enough discussion of the researcher’s methods. In addition, the population of the study appears to have been too small for the research to achieve statistical significance. This study does highlight, however, the challenges of creating a learning organization within an academic unit and the need to study participants at various organizational levels.

**Impact on Becoming a Learning Organization**

A challenge to quality, accountability, and assessment in higher education is the hierarchical structure of academic institutions, the emphasis on discipline, and the diverse organizational cultures of institutions and departments. These same aspects have also been described as inhibiting the formation of a learning organization.

**Importance of structure and culture.** Bergquist and Pawlak (2008) noted six different organizational cultures in higher education. The structure of higher educational institutions is hierarchical; an individual’s role is defined by placement within the hierarchy. Hammond (2004) defined the specific roles in higher education this way: presidents focus on business policies, provosts are the chief academic leaders, deans are
the managers of their respective colleges, which are generally divided by discipline, and chairs direct the activities of the specific departments under the guidance of the college dean. Dill (1992) argued that sub-units may be able to hide under the umbrella behavior of the overall institution which makes an examination of chairs and deans, separate from other academic leaders, necessary.

Bonvillian and Dennis (1995) argued faculty are unique because they often act separately from the college or university and have a greater loyalty to their discipline and therefore their academic unit. This has made quality efforts challenging. It has also been noted that faculty and administrators differ on quality (Koslowski, 2006); they also have a different point of view than stakeholders, which is why they should have more say in how quality is determined and measured (Eaton, 2010). Overall, Kline and Saunders (1998) noted that sub-units within organizations have generally developed their own rules of behavior, and cultures within subunits are often incompatible with the culture of the organization as a whole (Kline & Saunders, 1998). As Dill (1999) noted, most institutions of higher education are not structured for the principles of a learning organization to be effective. Educational organizations, in general, are perceived to be loosely coupled systems. Each part of the organization possesses a separate structure, identity, culture, behavior, and so forth. As each part interacts with the others and can have influence on the others, the parts generally maintain their separate status, identity, and function (Weick, 1976). These challenges highlight the need to examine department chairs and deans as both leaders of a department and members of a larger organizational unit, the college. Their perspectives on the activities of the college are likely to vary.
While the institutions are largely hierarchical, Hammond (2004) argued that within departments, the hierarchy is less evident because chairs often are hired with the support and approval of faculty. Department chairs also may have previously been colleagues. He also noted that universities are not always consistent in how they form departments, and there may be subdivisions within departments along discipline lines with different philosophies as to how the department or the college should be divided or aligned (Hammond, 2004).

Wolverton, Gmelch and Sorenson (1998) argued that “departments serve multiple masters” (p. 203) because departments must have an allegiance to both discipline and the institution. Within the role, to ensure quality and lead departmental change efforts, the chairperson must foster a collaborative environment, respect and encourage effective teaching practices, collect and use data for program evaluation, and provide effective leadership. According to Tucker and Bryan (1991), both deans and department chairs share many tasks because of the supervisory and leadership role the deans of colleges have. The success of the dean and the college can depend on how adept the department chairperson is in completing his or her responsibilities. The authors argued that “department chairpersons bear the primary responsibility for the college’s instructional and research programs” (p. 79).

Gardiner (2000) also argued that department chairs have the responsibility to ensure data is collected on student performance and that this data is used to improve the department. In fact, “the department must play a key role in improving the quality of students’ educational experiences. The mantle of frontline leadership for this change falls on the shoulders of the department chair and faculty” (p. 167). The department chair
role in higher education has shifted, and the chair is in the strongest position to enact change within and must serve as a change agent (Lucas, 2000). The deans, however, are expected to be responsible for taking the lead on change initiatives within their colleges (Tucker & Bryan, 1991).

One point of assessment at the student level is student learning outcomes. Ewell, Paulson and Kinzie (2011) conducted a national survey of department chairs and program directors from all accredited two- and four-year institutions in the United States; three to five chairs or directors were chosen from each institution. The researchers found that “there is considerable assessment activity at the program level” and “perceptions of program heads differ from chief academic officers in terms of the challenges that must be addressed to advance assessment on campus” (p. 5). Points of view also differ between pure faculty and faculty who share administrative roles such as department chairpersons and college deans. Koslowski (2006) provided an overview of quality initiatives in higher education and noted that administrators and faculty have different perceptions about quality and this can be attributed to their varied engagement with overall university or college functions. In carrying out their teaching responsibilities, faculty are integral to quality efforts; however, they have a great deal of autonomy in how their work is accomplished: “faculty…often carry out their duties quite independently of the college or university” and “quality in academic is truly embodied in the way faculty and staff see their work and determine how it will get done” (Bonvillian & Dennis, 1995, p. 39). As members of both faculty and administration, department chairpersons and deans are bridges between the two groups.

**Importance of General Education.** Hammond (2004) noted that universities
make a distinction between the professional programs such as law, dentistry, engineering, and so forth that lead to specific professions and those departments or colleges that do not grant degrees for these areas. Also, general education has taken on an important role in assessment. Weiner (2009) identified the ongoing evaluation of general education as a critical component of an organization committed to assessment.

General education courses are also those which are the most transferable which is important for students to reduce college courses and time to degree completion (Ewell, Boeke, & Zis, 2010). Perception of quality in relation to accreditation also is essential for articulation agreements between colleges for acceptance of credits (Shoenberg, 2004). Shoenberg (2004), from the AAC&U, reported on a review conducted by the organization on transferability of general education credits. The group reviewed the websites of the higher education executive officers association (SHEEO) for all 50 states to determine general education requirements. General education generally included math and English/composition, oral communication and technology. Information was found for 48 of 50 states. Of these, 38 had a general education package students needed to take. Only 10 of the states offered a rationale for the courses; most did not. Six of the 48 focused on both subject matter and purpose for students taking the course. The study was conducted to respond to institutions concerns that "the coherence of their program and the meaning of their degree are subverted by having to accept courses in transfer that are not congruent with their concept of baccalaureate education" (p. 20). Perception of quality of the general education courses is essential for articulation agreements between colleges for acceptance of credits.
Summary

In this chapter, I have reported on the extant literature on the key elements of my research study. I have reviewed the prior and current status of higher education in its continuous quest for improvement, from quality initiatives, to accountability, to the present climate of assessment. Literature on learning organization theory, as the basis for examining higher educational institutions, has also been discussed. Specific aspects of higher education, such as culture, type of institutions, and the roles of deans and chairpersons, has also been discussed. In the next chapter, I will present the methods to be used for gathering the perceptions of deans and department chairs as to whether their academic colleges possess the principles of a learning organization and whether the use of these principles is linked to perceived improvement from the use of the principles and perceived success on performance indicators.
CHAPTER III

METHODOLOGY

The current climate in higher education, with its emphasis on quality, accountability, and assessment, places pressure on higher education institutions to collect and report evidence of their performance. But excellence in data collection and reporting will not be sufficient. Institutions will also need to be dynamic and responsive, using the data that is gathered to guide improvement and measure success. Learning organization theory gives academic leaders principles they can use to make their climates conducive to working towards improvement and increasing performance on measures of success.

To understand the beliefs of deans and department and division heads in relation to their perceptions of their colleges as learning organizations, a survey was conducted to capture these perceptions. Gall, Gall, and Borg (2007) noted that research in education is necessary to add to the knowledge base, answer questions, and improve teaching and administrative practices. In this case, my research will be used to both answer questions and provide information that could drive change in leaders’ behaviors. The authors also noted that there are four kinds of knowledge that can be derived from educational research. It can be used to derive explanation, make predictions, provide descriptions, and suggest improvements (Gall, Gall, & Borg, 2007). Research is also conducted to fill gaps, test existing theories, replicate previous studies, and retest hypotheses from prior studies (Galvan, 2009).

My research sought to gather data sufficient enough to describe the current situation in specific academic units as to their beliefs about learning organizations, and understand to what extent knowing these beliefs can help to predict what learning
organization principles are most relevant for improvement and measuring success on performance indicators. In examining these areas, I also learned which principles are perceived to be present within the colleges. The questionnaire provided information on an institutional type – colleges with a professions focus – for which there is limited research. Thus, this research will be useful to academic leadership in these types of institutions to understand how they may use the principles of learning organizations to create academic units more capable of responding to demands for assessment and improved performance. Ultimately, organizations will need to use assessment data for long-term improvement.

**Research Design**

Because institutions with a professions focus as a category of institutional type are not centralized to any specific region of the country, and no region has a concentration of these types of institutions, a national survey was necessary to capture enough data to understand this specific sub-unit of higher educational institutions. My study is a non-experimental, cross-sectional design and provides a “numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell, 2009, p. 12). The survey method is the most efficient way in terms of money and time to collect data from a scattered population (Lin & Van Ryzin, 2012).

**Population, Sample and Participants**

My study used a single-stage sampling procedure as access to all members of the population can be reached directly (Creswell, 2009). Random sampling was not used because of the danger of not achieving a significant enough response rate for analysis.
Response rates for similar studies have ranged between 10% (Holyoke, Sturko, & Wood, 2012) and 49% (Collie & Taylor, 2004).

**Institutions with a professions focus.** The population for this study was leaders of academic units, specifically deans and department heads, from general education disciplines. The leaders were from institutions that have a professions focus. These institutions represent a unique subset of higher education that is rarely examined on its own. These institutions are different from other higher education institutions because they emphasize professional degree programs and develop students toward specific career paths such as health care, technology, engineering, religious service, and even performing arts careers in dance and music. The Carnegie designation of institutions with a professions focus is divided into three areas: all undergraduate, undergraduate with some graduate, and primarily graduate. Because of my emphasis on general education disciplines, only the first two categories, “Professions focus, no graduate coexistence” (Prof-F/NGC) and “Professions focus, some graduate coexistence” (Prof-F/SGC), were included in this study. For an institution to receive the Carnegie designation of Prof-F/NGC and Prof-F/SGC, the institution must focus on professional undergraduate programs, although they may offer some graduate degrees, and at least 80% of the undergraduate degree fields must have a professions focus (“Classification Description,” n.d.). Stark (1998) argued that institutions focused on career and pre-professional programs are significantly different enough to be studied separately from other types of institutions, and Hammond (2004) noted that structural differences exist among the various types of colleges and departments within them.
To find these institutions, I visited the website of the Carnegie Foundation for the Advancement of Teaching and reviewed the various Carnegie Classifications offered there. To find the institutions specific to my study, I used the Institution Lookup to identify organizations with the “Prof-F/NGC” and “Prof-F/SGC” classifications. The website returned 251 results for these classifications. Of these, 78 institutions are private, for-profit organizations. The remaining 173 institutions are non-profit; 27 are public institutions, and 146 are private, not-for-profit institutions. Some examples of institutions that receive this designation are Ferris State University, Davenport University, and Kettering University in Michigan, and Embry Riddle Aeronautical University in Florida, Indiana Wesleyan University, and Kentucky Christian University.

**General education.** Within these institutions, my study focused on all academic leaders in general education subjects with the title of dean, associate dean, division or department chair or head, and program and division director. Individuals with these titles, or variations of them, were determined to be serving as the leaders within their academic units and subunits by a review of the institution’s website or academic catalog. I identified the leaders by looking at all faculty within the related colleges or departments and selecting the individuals who were identified separately from faculty using one of these terms: director, dean, chair, or head. For the purpose of my study, general education departments and colleges were those that focused on the arts, humanities, mathematics, social sciences, and sciences and were housed in a similarly named school, college, or division. Some of the departments surveyed were in service to other degree-granting departments; others offered programs of study with associates or bachelor’s degrees in the disciplines. Departments were not omitted if they offered degrees;
however, departments within the colleges were omitted if a department was for a pre-
professional program, such as law or medicine, or was a degree-granting program and not
intended for general study, such as nursing, interior design, or education. Many of the
institutions within the population had religious affiliations or programs of study in
religious areas. In many cases, these departments were housed in the college or school of
arts and sciences and were included in the study. For larger institutions, multiple colleges
housed the general education disciplines. In these cases, all departments which fit the
criteria were included, even if they were not in the same college. For some of the smaller
institutions, there were no divisions by the institution into separate academic colleges. In
this case, any department that fit under the broad categories of arts, humanities, sciences,
mathematics, or social sciences were included. Some individuals were responsible for
multiple departments and were included as long as one of the departments they
supervised fit the criteria.

Sample. The overall population for the study was 835 individuals from the 251
institutions identified. The names and email addresses of participants were gathered from
the Internet using public resources such as the college or university’s website. Within the
website, I used academic catalogs, faculty directories, or college or departmental websites
to determine the academic leaders. All leaders who could be identified from the review
of websites were included in the study and were sent the questionnaire. Twenty-four of
the institutions on the list were from Puerto Rico and were excluded from the study
because the institutions’ materials were presented only in Spanish. An additional 48
private, for-profit institutions, 11 private, nonprofit institutions, and one public institution
either had no leaders listed or did not provide accessible email addresses. Six additional
institutions identified themselves as closed or no longer accepting students. In total, email addresses for academic leadership were available for 161 of the 251 institutions identified as the population of this study.

**Instrumentation**

The data for this study was collected using a questionnaire. To develop the questionnaire, I reviewed the behaviors as described in Senge (1990a, 1990b), Garvin (1994), Kline and Saunders (1998) and Dill (1999). I created a matrix of the behaviors reported by each of the authors (See Appendix A). From this matrix, I derived my conceptual framework as shown in Figure 1 in Chapter I. This conceptual framework is comprised of six principles: *learning, communication, measurement, problem-solving, structure, and vision.* To identify specific behaviors under each of these six principles, I went back to the review of the literature recorded on the matrix. I included six to nine behaviors for each of the principles to be used to develop a score for each of the principles. The behaviors selected were those I felt were most likely to be experienced by the academic leaders targeted by the study.

The questions designed for the instrument were six-point visual scales with radio buttons for the perception questions, forced choice or short answer for the demographic questions, and one open-ended question to gather additional suggestions from the participants. Each of the visual scales provided six radio buttons that could be clicked to determine to what extent the respondent felt the behavior was present within his or her academic unit, ranging from “never” to “always.” Dillman, Smyth, and Christian (2009) cited multiple research studies in which the validity of a question of this type, presented vertically with the radio buttons, was similar to visual analog scales but took less time for
respondents to complete. A complete copy of the questionnaire instrument can be found in Appendix B.

**Questionnaire design.** To capture the beliefs of leaders about learning organizations, I created a web-based questionnaire. This questionnaire was designed following the principles of the Tailored Design Method (TDM) to increase responses from participants through the creation and ordering of questions, instrument design, and testing and implementation. The TDM has been shown to reduce the four sources of error in survey research: coverage, sampling, nonresponse, and measurement (Dillman, Smyth, & Christian, 2009). Even though random sampling was not be used, it is expected that the use of this method for the design of the questionnaire reduced nonresponse and measurement errors. The questionnaire included behavioral statements under all six principles: learning, communication, measurement, problem-solving, structure, and vision. An additional set of questions asked participants about the link between the principles and performance indicators used at their institutions. A final section asked for background information of the respondents, such as role within the institution, size of institution, and time in current position.

**Validity.** The instrumentation for any survey method must be evaluated to determine the validity of the instrument as an effective research tool. According to Creswell (2008), validity means the researcher is able to use the questions to accurately respond to the research questions and that the responses to the instrument are meaningful. There are multiple ways to ensure the validity of survey instrumentation. The first is to ensure that questions are clear and not ambiguous and that directions and use of the survey are clear and consistent; this was ensured through content validity. Experts in the
field evaluated the questions to determine their appropriateness for answering the research questions (Creswell, 2008). The pilot testing procedures discussed later helped to create a valid instrument.

Statistical methods were also used to ensure validity of the instrument. Because multiple behavioral statements under each question were to be collapsed into single variables, a confirmatory factor analysis was conducted. The purpose of this statistical analysis is to reduce multiple variables into a common element (Gall, Gall, & Borg, 2007). A popular statistical evaluation of survey questionnaires is Cronbach’s coefficient alpha in which the internal consistency of the survey questions is evaluated. This was performed following the completion of the questionnaire. Ruth (2010) noted that the Cronbach’s coefficient alpha is appropriate for Likert scale questions, and the statistical test is appropriate to measure whether questionnaire items are measuring similar concepts. Because the questionnaire uses continuous variables (never to always), “the alpha provides a coefficient to estimate consistency of scores on an instrument” (Creswell, 2008, p. 171).

**Pilot Testing**

The first step to ensure the validity of the survey instrument was to have the questionnaire examined by four individuals with specific knowledge of this type of research and discipline knowledge related to the content. These individuals also examined the initial design and timing of the instrument. The questionnaire was adjusted as needed based on the responses of these experts.

The second step to ensure the validity of the instrument was the use of cognitive interviews. A cognitive interview asks respondents to complete the questionnaire while
providing an out-loud recitation of what the respondent is thinking during the process. They are a very effective method of identifying problems with question wording and instrumentation design (Dillman, Smyth, & Christian, 2009). During the interview, I asked respondents questions about the design and their understanding of the questions as they moved through the instrument. Two initial interviews were held to determine the clarity of the instructions and the questions to ensure that question order, questions, and response sets were clear and as free of bias as possible. Following these two interviews, the questionnaire was adjusted again based on the feedback. Two additional cognitive interviews were held after the final revision of the document to ensure adjustments made during the revision process improved the question and instrument design while maintaining content validity.

In addition to the expert validation and the cognitive interviews, a pilot test was conducted. A pilot test “is a procedure in which a researcher makes changes in an instrument based on feedback from a small number of individuals who complete and evaluate the instrument” (Creswell, 2008, p. 402). The test was conducted on the survey questionnaire and web-based delivery format to determine how well the questionnaire and delivery method worked to meet the needs of the study. Six academic leaders or faculty who are employed at institutions or within departments that are not part of the population for this study participated in the pilot. Dillman, Smyth, and Christian (2009) note that pilot tests are necessary when an instrument is being used for the first time.

The authors also argued that deploying a web-based survey without pilot testing can be “disastrous” because of the potential for technological issues including access code, data collection, function, speed, and other types of issues (Dillman, Smyth, &
Christian, 2009, p. 229). To anticipate any technological issues, I, or someone else at my request, reviewed the questionnaire across various types of devices, including tablet technology, to note any design, timing, or completion issues. It is important to review the document across various platforms, browsers, and hardware to control for any effect these variations might have on the instrument (Dillman, et al.). Adjustments to the delivery system as well as to the questionnaire were made following the completion of the content evaluation, cognitive interviews, and pilot test.

The pilot and final version of the survey were deployed using SurveyMonkey. The online software was customizable and was capable of a variety of question types. The data was exported into Excel and was uploaded into SPSS for statistical analysis.

Data Collection

Confidentiality. The confidentiality of the data is very important. Individuals who participated in my study were informed about the study, the data to be collected, and the use of the data, and they were asked to consent to participate before beginning the questionnaire. Individuals were advised that, if they completed the survey, this was also equal to consent. Responses for anyone who selected “no” on the consent screen were discarded. During the questionnaire, respondents could skip any question. Responses to the survey were not tracked; therefore, each member of the population received all of the reminders for the study. SurveyMonkey did collect IP addresses for each respondent, but these were removed before analysis. Email addresses for each participant were not recorded. The completed data has been stored on a password protected computer, and SurveyMonkey requires a password to obtain the data. Before the study was conducted,
approval from the Western Michigan University Human Subjects Institutional Review Board was received (see Appendix C).

**Procedures.** Individuals who were identified as participants in my study received an email containing a link to the questionnaire entitled Academic Learning Organization Survey that was developed in SurveyMonkey. This initial email explained the purpose of my study and asked for participants to click on the link and complete the questionnaire. The email also offered participants a chance to ask questions. The survey was deployed to the email list created by me and divided into 30 email groups. The first screen of the web-based questionnaire included a welcome message, with consent to participate, and the final screen of the questionnaire included a thank you message. The opening and closing messages are included as part of the questionnaire and can be found in Appendix B. All members of the population received two additional follow up reminder emails, as I did not know who had completed the survey. The total data collection time for my study was one month, from November 11 to December 11, 2013.

**Data Analysis**

The data collected for this study are quantitative. Participants were asked perception questions and replied to these questions using a six-point visual scale. Each of the six principles discussed in Chapters I and II had five to eight behaviors identified as indicating the presence of the principle. The responses to the questions in each of these six areas were collapsed into six single independent variables: Learning, Communication, Measurement, Problem-Solving, Structure, and Vision. Respondents also answered questions about their perceptions of how information gained through the presence of the principles is used for perceived improvement and about the leaders’ perceived success on
performance indicators used in their organizations. These questions were used to create two additional dependent variables: *perceived improvement* and *perceived success*.

Figure 2 illustrates the independent and dependent variables.

![Diagram of independent and dependent variables]

*Figure 2: Illustration of independent and dependent variables.*

Because the measures of each learning organization principle were developed by me and were not from an existing instrument, analysis of each behavioral statement as a component for each variable was important. To ensure that each grouping of behavioral statements was related to the same concept, I conducted a factor analysis of each set of questions. Because I planned to collapse groupings of questions into single variables, I conducted statistical analysis to ensure the validity of each question as a measure of the principle. Cronbach’s alpha is a popular approach to ensuring reliability (Gall, Gall, & Borg, 2007). Also, according to Gliem and Gliem (2003), it is important to use multiple items and evaluate those items using internal consistency reliability to ensure correct data analysis; single items often lead to low reliability. This analysis was used to determine whether any of the questions within each of the variables, the six principles, improved
performance, or measures of success, was invalid and should be removed before the question groupings were collapsed into eight scaled variables.

Once the validity of the questions was ensured, I looked at the frequencies and descriptive statistics for each question and for each of the collapsed variables. The six variables representing the principles were examined to determine both their presence and the link between the principles and perceived improvement from information gained through the use of the principles and perceived success on performance indicators.

Shmueli (2010) noted that statistical modeling can be used for both explanation and prediction. In my study, I examined the presence of the principles as an explanation of the perception of perceived improvement from information gained from the use of the principles and perceived success on specific performance indicators. To determine whether the six principles are predictors for perceived improvement from the presence of the learning organization principles and perceived success on the performance indicators, I used standard multiple regression analysis (MRA). MRA was appropriate because I wanted to examine the relationship between a dependent variable and more than two independent variables. MRA is also appropriate for making predictions. MRA was used to understand which of the independent variables had an influence upon the dependent ones (Gall, Gall, & Borg, 2007; Shavelson, 1996).

**Cross Walk Table**

The following table (Table 1) illustrates how each of the questions in the survey instrument aligned with the specific research questions as discussed in Chapter I and the type of data analysis performed for each research question.
Table 1

**Analysis of Results of Questionnaire**

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Items from the Questionnaire</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent do these leaders perceive their colleges to be engaged in the (a) six principles of a learning organization, (b) use of the principles toward successful improvement, and (c) perceived measures of success?</td>
<td>2, 3, 4, 5, 6, 7</td>
<td>Descriptive statistics</td>
</tr>
<tr>
<td>To what extent do these leaders believe information gained through the presence of the principles: (a) used for perceived successful improvement and (b) linked to perceived measures of success?</td>
<td>Successful Improvement 2h, 3g, 4i, 5f, 6f, 7f</td>
<td>Correlation, multiple regression analysis</td>
</tr>
<tr>
<td>Perceived Measures of Success</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>To what extent do these leaders believe the usage of learning organization behaviors for perceived successful improvement is linked to perceived measures of success?</td>
<td>2h, 3g, 4i, 5f, 6f, 7f, 8</td>
<td>Correlation, multiple regression analysis</td>
</tr>
<tr>
<td>What suggestions do deans and chairs have … to develop learning organization principles?</td>
<td>9</td>
<td>Qualitative review for themes</td>
</tr>
</tbody>
</table>

**Delimitations and Limitations**

One of the delimitations of this study was the need to use a census rather than a sample. The sample for this study is equivalent to its population; thus, the data garnered from this research cannot be evaluated probabilistically. It also limited how the results could be generalized to any population (Gall, Gall, & Borg, 2007). Using a census rather than a sample prevents the data from being analyzed in such a way that it can provide generalizations about any overall population. Dillman, Smyth and Christian (2009) noted that sampling error is present in all surveys which use a sample. Even though a census was being used for this study, there still exists sampling error because I may not have
found all of the individuals who would be considered participants because the person’s name may have been omitted from a public listing or the person may be a relatively new hire. Websites and catalogs may have been out-of-date or email addresses may have been incorrect or absent.

Even though I used a survey in which users could respond anonymously to pre-designed survey questions not based on researcher observation or participant response, the research is not completely objective. In all research there is the influence of the researcher (Gall, Gall, & Borg, 2007); here, it is in my selection of participants, questionnaire design, deployment methods, and analysis that can be influenced. No research, no matter how objective, is free of the inherent biases of the researcher, and this is a limitation.

Summary

This chapter outlines the questionnaire design and analysis of the data of an online survey to the deans and department chairs in general education at colleges with the Carnegie classification of Prof-F/NGC, professions focus, no graduate coexistence, and Prof-F/SGC, professions focus, some graduate coexistence, in the United States. The questionnaire was designed using the Tailored Design Method (Dillman, Smyth, & Christian, 2009) and was administered through a web-based software program, SurveyMonkey, over a month-long period. Pilot testing, cognitive interviews, and content validity ensured the validity of the instrument. Following HSIRB approval for the study, I invited participants to participate through one initial and two reminder emails. Individuals responded anonymously to the survey. The results of the survey were
analyzed using descriptive statistics, correlation, and multiple regression analysis. The detailed results of the analysis of the data are presented in the next chapter.
CHAPTER IV

RESULTS

This chapter details the results of the web-based Academic Learning Organization Survey administered to academic leadership in general education at institutions with a professions focus in the United States. This chapter provides details of the responses for each question as well as demographic data on the respondents. This chapter also details the results of the presence of each of the principles, the relationship of the principles to perceived areas of improvement and leaders’ perceptions of performance on indicators of success, and the suggestions academic leaders had as to how their academic units could better demonstrate learning organization principles.

Demographic Information and Respondent Data

The original survey invitation email was sent to 835 leaders of general education academic units within colleges that have a professions focus, whose email addresses could be identified from either the institution’s website or online catalog. Fifteen emails were returned for incorrect or undeliverable email messages. Two individuals’ auto reply messages indicated they were unavailable during the duration of the study, four individuals were no longer academic leaders, one could not complete the survey because of institutional policy, and one requested to be removed. Overall, 23 of the 835 individuals were known to be not available to participate, leaving the survey population at 812 (N=812). Of these, 207 individuals responded to the consent message, with 24 individuals responding “yes” to the consent screen, but completing none of the questions. Although it is not known why individuals consented to participate and then did not, one individual did inform me that she had tried multiple times to complete the survey but it
stopped in the same place each time. It is possible that browser or user errors prevented individuals from moving past the first screen of the questionnaire. Two other individuals declined to participate by selecting “no” on the consent screen. There were 180 responses of some kind to sections of the first part of the questionnaire asking about respondents’ behaviors related to the six learning organization principles, and 169 individuals completed enough of the survey to be included in the more detailed analysis of the data. Completed questionnaires were considered sufficient for analysis if there were responses to at least four of the six questions relating to the presence of the learning organization principles. This meant that the overall numbers of usable surveys was 180 (out of 812, or a 22.2% response rate).

The first step in analyzing the data was to examine the frequencies and descriptive statistics for each of the questions. There were 164 responses to the demographics questions. Department Heads were the largest group of respondents (66.46%), followed by Deans (17.7%), Division Heads (8.5%), Associate Deans (4.26%), and Directors (3.0%). The majority of the respondents had been employed in their current leadership role fewer than five years (43.4%). Other respondents had been employed 5-9 years (33.7%), 10-14 years (10.8%), and more than 15 years (11.4%). Respondents demonstrated having spent a significant time at their institutions with the majority serving more than 15 years (46.4%). Others had been employed for 1-4 years (10.2%), 5-9 years (24.1%), and 10-14 years (19.3%). For all three of these questions, several individuals did not provide responses or provided open ended responses which did not fit these parameters. Table 2 provides the frequencies and percentages for each of the categories for these demographic questions.
Table 2

Descriptive Statistics for Role, Years in Current Role, and Years at Current Institution

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dean</td>
<td>29</td>
<td>17.7</td>
</tr>
<tr>
<td>Associate Dean</td>
<td>7</td>
<td>4.3</td>
</tr>
<tr>
<td>Department Head</td>
<td>109</td>
<td>66.5</td>
</tr>
<tr>
<td>Division Head</td>
<td>14</td>
<td>8.5</td>
</tr>
<tr>
<td>Director</td>
<td>5</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>164</td>
<td></td>
</tr>
<tr>
<td><strong>Years in Current Role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4 years</td>
<td>72</td>
<td>43.4</td>
</tr>
<tr>
<td>5-9</td>
<td>56</td>
<td>33.7</td>
</tr>
<tr>
<td>10-14</td>
<td>18</td>
<td>10.8</td>
</tr>
<tr>
<td>15+</td>
<td>19</td>
<td>11.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>166</td>
<td></td>
</tr>
<tr>
<td><strong>Years at Institution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4 years</td>
<td>17</td>
<td>10.2</td>
</tr>
<tr>
<td>5-9</td>
<td>40</td>
<td>24.1</td>
</tr>
<tr>
<td>10-14</td>
<td>32</td>
<td>19.3</td>
</tr>
<tr>
<td>15+</td>
<td>77</td>
<td>46.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>

Respondents were also asked to identify their academic discipline and institution type, as shown in Table 3. The majority of the respondents (n=158) identified as belonging to the Arts & Humanities, including English and Communication (27.2%), followed by the Social Sciences (25.9%), Mathematics (17.1%) and Sciences (16.5%). An additional 13.3% identified as general education, developmental education, or another discipline. Some individuals identified more than one discipline; in these cases, the first discipline listed was used. Individuals who identified Bible, religion, or theology were included in the Social Sciences. With regard to institution type, the majority of the respondents (n=165) were from private, nonprofit institutions (75.2%), with a majority of the respondents reporting that their institutions had a religious affiliation (48.5%).
remaining respondents were from public institutions (19.4%) or private, for-profit institutions (5.5%).

Respondents were also asked to report the size of their institutions based on total student enrollment (part-time and full-time, graduate and undergraduate students), as shown in Table 3. The open-ended responses from the academic leaders were organized according to the Carnegie size classifications for four-year institutions (fewer than 1,000 students, 1,000-2,999 students, 3,000-9,999 students, and more than 10,000 students). The majority of the institutions were small, four-year institutions with 1,000-2,999 students (54.3%), followed by medium-sized institutions of fewer than 10,000 students (28.0%). The smallest institutions reported fewer than 100 students, while one institution reported a student enrollment of more than 100,000.

Table 3

Descriptive Statistics for Academic Discipline, Institution Type, and Student Enrollment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Discipline (n=158)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts &amp; Humanities</td>
<td>24</td>
<td>15.2</td>
</tr>
<tr>
<td>English &amp; Communications</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Developmental/General Education</td>
<td>13</td>
<td>8.2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>27</td>
<td>17.1</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>41</td>
<td>25.9</td>
</tr>
<tr>
<td>Sciences</td>
<td>26</td>
<td>16.5</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>5.1</td>
</tr>
<tr>
<td>Institution Type (n=165)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, nonprofit (no religious</td>
<td>44</td>
<td>26.7</td>
</tr>
<tr>
<td>affiliation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, nonprofit (religious</td>
<td>80</td>
<td>48.5</td>
</tr>
<tr>
<td>affiliation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, for profit</td>
<td>9</td>
<td>5.5</td>
</tr>
<tr>
<td>Public</td>
<td>32</td>
<td>19.4</td>
</tr>
<tr>
<td>Student Enrollment (n=164)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fewer than 1,000</td>
<td>14</td>
<td>8.5</td>
</tr>
<tr>
<td>1,000-2,999</td>
<td>89</td>
<td>54.3</td>
</tr>
<tr>
<td>3,000-9,999</td>
<td>46</td>
<td>28</td>
</tr>
<tr>
<td>More than 10,000</td>
<td>15</td>
<td>9.1</td>
</tr>
</tbody>
</table>
Presence of Learning Organization Principles

To determine the presence of the learning organization principles, respondents were asked to identify whether specific behaviors were present in their academic units using a six-point Likert scale ranging from never (1) to always (6). A full list of behavioral statements and responses can be found in Table 4.

Table 4

Responses to Learning Behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>Likert Scale Number</th>
<th>Frequency</th>
<th>Percent</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals serve as resources for each other</td>
<td>[1] 0 [2] 6 [3] 21</td>
<td>46</td>
<td>54</td>
<td>50</td>
<td>4.68</td>
</tr>
<tr>
<td>Learning is consistently applied to change initiatives within the college</td>
<td>[1] 3.4 [2] 10.7 [3] 20.8</td>
<td>33.1</td>
<td>20.1</td>
<td>11.2</td>
<td>3.91</td>
</tr>
</tbody>
</table>

Note: Not all participants responded to every behavioral statement.
Likert Scale=(1) Never- (6) Always

The first set of seven statements asked respondents to report the presence of behaviors related to the learning organization principle of learning. The behavior
respondents found to be the most prevalent among them was “individuals are encouraged to share ideas” (M=4.89), “Individuals are encouraged to engage in continuous learning” (M=4.88), and “individuals serve as resources for each other” (M=4.68), while “learning is consistently applied to change initiatives within the college” (M=3.91) was the least identified behavior.

The second principle leaders were asked to report on was communication. Six statements were asked under this learning organization principle (see Table 5).

Table 5

Responses to Communication Behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals ask one another for support</td>
<td>180</td>
<td>0</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Knowledge is shared through oral reports</td>
<td>180</td>
<td>0.5</td>
<td>6.7</td>
<td>19.4</td>
</tr>
<tr>
<td>Individuals understand how they can communicate with others within the college</td>
<td>179</td>
<td>2.2</td>
<td>9.5</td>
<td>24.6</td>
</tr>
<tr>
<td>Data is consistently shared with members of the college</td>
<td>180</td>
<td>3</td>
<td>26</td>
<td>39</td>
</tr>
<tr>
<td>Knowledge is shared through written reports</td>
<td>180</td>
<td>1.1</td>
<td>14.4</td>
<td>27.8</td>
</tr>
<tr>
<td>Communication exists between external stakeholders and members of the college</td>
<td>180</td>
<td>3.3</td>
<td>18.9</td>
<td>29.4</td>
</tr>
</tbody>
</table>

Note: Not all participants responded to every behavioral statement. Likert Scale=1(Never) – (6) Always
Respondents reported that “individuals ask one another for support” was most prevalent (M=4.48), while “communication exists between external stakeholders and members of the college” was the least identified (M=3.41).

Next, respondents were asked to share their perceptions of the presence of behaviors related to measurement (see Table 6).

Table 6

Responses to Measurement Behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>Frequency Percent</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college conducts course evaluations</td>
<td>170</td>
<td>1  2  9  11  41  107</td>
<td>0.5 1.1 5.3 6.4 24 63</td>
<td>5.42</td>
<td>0.94</td>
</tr>
<tr>
<td>The college conducts program evaluations</td>
<td>169</td>
<td>3  6 20 29 48 63</td>
<td>1.8 3.6 11.8 17.2 28.4 37.3</td>
<td>4.79</td>
<td>1.26</td>
</tr>
<tr>
<td>Individuals are encouraged to use data for decision-making</td>
<td>169</td>
<td>0 14 29 42 45 39</td>
<td>0 7.8 17.2 24.9 26.7 23</td>
<td>4.39</td>
<td>1.24</td>
</tr>
<tr>
<td>Student-related performance indicators are used for decision-making</td>
<td>170</td>
<td>1 10 27 47 58 27</td>
<td>0.5 5.9 15.9 27.6 34 15.9</td>
<td>4.36</td>
<td>1.14</td>
</tr>
<tr>
<td>There are practices in place to measure success within the college</td>
<td>168</td>
<td>1 9 32 52 44 30</td>
<td>0.5 5.3 19 31 26 18</td>
<td>4.30</td>
<td>1.16</td>
</tr>
<tr>
<td>Faculty-related performance indicators are used for decision-making</td>
<td>169</td>
<td>3 13 36 43 52 22</td>
<td>1.8 7.7 21.3 25.4 30.8 13</td>
<td>4.15</td>
<td>1.22</td>
</tr>
<tr>
<td>Data is accessible to members of the college for use in decision-making</td>
<td>170</td>
<td>3 26 41 41 34 25</td>
<td>1.8 15.3 24 24 20 13.9</td>
<td>3.89</td>
<td>1.34</td>
</tr>
<tr>
<td>Individuals are encouraged to test existing knowledge</td>
<td>168</td>
<td>4 25 39 46 34 20</td>
<td>2.4 14.9 23.2 27.4 20.2 11.9</td>
<td>3.84</td>
<td>1.31</td>
</tr>
</tbody>
</table>

Note: Not all participants responded to every behavioral statement.
Likert Scale=1(Never) – (6) Always
The most prevalent behaviors related to measurement were “the college conducts course evaluations” (M=5.42) and “The college conducts program evaluations: (M=4.79), while “individuals are encouraged to test existing knowledge” (M=3.84) and “Data is accessible to members of the college for use in decision-making” (M=3.89) were identified as being less prevalent.

The fourth set of behavioral statements focused on the learning organization principle of problem-solving. Respondents were asked to report their perception of the presence of this principle by responding to five behavioral statements. The complete responses for this section can be found in Table 7. The leaders responded that “individuals identify problems to be solved” (M=4.50) and “knowledge is used for problem-solving” (M=4.05) as being the most prevalent behaviors, while “quick fixes and reactionary decisions are avoided” was identified as being less prevalent (M=3.3)

Table 7
Responses to Problem-Solving Behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency Percent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Not all participants responded to every behavioral statement.
Likert Scale=1(Never) – (6) Always
Respondents were also asked to report their perception of the presence of behaviors related to the learning organization principle of *structure* (see Table 8). The responses to the five statements can be found in Table 8. The leaders reported that “as a leader, I can see how the parts of the college effectively interact” as more present (M=4.41), while “others understand how parts within the college effectively interact” as being less prevalent (M=3.64).

Table 8

*Responses to Structure Behaviors*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>Frequency Percent</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a leader, I can see how the parts of the college effectively interact</td>
<td>168</td>
<td>[1] 2 10 22 38 75 21</td>
<td>1.2 6 13.1 22.6 44.6 12.5</td>
<td>4.41</td>
<td>1.12</td>
</tr>
<tr>
<td>Committees address quality, assessment, and standards issues within my college</td>
<td>168</td>
<td>[2] 3 9.5 14.9 20.2 32.7 19.7</td>
<td>33</td>
<td>4.29</td>
<td>1.36</td>
</tr>
<tr>
<td>Our structure permits communication between academic disciplines</td>
<td>167</td>
<td>[3] 4 15 26 38 52 32</td>
<td>2.4 9 15.6 22.8 31.1 19.2</td>
<td>4.29</td>
<td>1.32</td>
</tr>
<tr>
<td>Faculty work across discipline units</td>
<td>168</td>
<td>[4] 2 24 26 42 56 18</td>
<td>1.2 14.3 15.5 25 33.3 10.8</td>
<td>4.07</td>
<td>1.26</td>
</tr>
<tr>
<td>Others understand how parts within the college effectively interact</td>
<td>168</td>
<td>[5] 5 24 45 55 31 8</td>
<td>3 14.3 26.8 32.7 18.5 4.8</td>
<td>3.64</td>
<td>1.17</td>
</tr>
</tbody>
</table>

*Note:* Not all participants responded to every behavioral statement. Likert Scale=(1) Never – (6) Always

The final learning organization principle to be addressed was *vision*. Leaders were asked to respond to five statements that related to the perception of behaviors in their colleges as related to vision. Table 9 shows the detailed responses to each statement. The behavior perceived to be most prevalent was “members of the college are
encouraged to contribute toward the institutional vision” (M=4.06), while “everyone feels an ownership of the institutional vision” was perceived to be less prevalent (M=3.40).

Table 9

**Responses to Vision Behaviors**

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>Frequency Percent</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members of the college are encouraged to contribute toward the institutional vision</td>
<td>168</td>
<td>12 20 20 41 44 31</td>
<td>7.1 11.9 11.9 24.4 26.2 18.5</td>
<td>4.06</td>
<td>1.5</td>
</tr>
<tr>
<td>The college as a whole contributes to the institutional vision</td>
<td>168</td>
<td>12 27 25 39 42 23</td>
<td>7.1 16.1 14.9 23.2 25 13.7</td>
<td>3.84</td>
<td>1.49</td>
</tr>
<tr>
<td>Individuals within the college focus on positive, rather than negative, views of the institutional vision</td>
<td>167</td>
<td>8 29 39 45 35 11</td>
<td>4.8 17.4 23.4 27 21 7</td>
<td>3.62</td>
<td>1.30</td>
</tr>
<tr>
<td>Members of the college are encouraged to take risks towards achieving the long-term institutional vision</td>
<td>168</td>
<td>15 32 34 39 33 15</td>
<td>9 19.1 20.2 23.2 19.7 9</td>
<td>3.52</td>
<td>1.45</td>
</tr>
<tr>
<td>Everyone feels an ownership of the institutional vision</td>
<td>168</td>
<td>14 34 35 48 30 7</td>
<td>8.3 20.2 20.9 28.6 17.9 4.2</td>
<td>3.40</td>
<td>1.33</td>
</tr>
</tbody>
</table>

*Note: Not all participants responded to every behavioral statement. Likert Scale=(1) Never – (6) Always*

Two additional sets of questions were used to determine the leaders’ perceptions of the use of information gained from the principles for improvement and the leaders’ beliefs about their success with various performance indicators. Respondents were asked to report their perceived successful improvement from information gained from the behaviors identified in the principles on a six-point scale, ranging from never (1) to always (6). Table 10 provides the complete responses to the behavioral statements related to improvement. The leaders responded that the “organizational structure
successfully supports improvements within my college” as being the most prevalent behavior (M=4.03); the least prevalent behavior was “our institutional vision successfully supports improvements within my college” (M=3.76).

Table 10

*Leaders’ Use of Information from the Principles toward Improvement of the College*

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our organizational structure successfully supports improvements within my college</td>
<td>167</td>
<td>9 15 27 47 51 19</td>
<td>4.03</td>
<td>1.33</td>
</tr>
<tr>
<td>The above learning behaviors are successfully being used to support improvements within my college</td>
<td>180</td>
<td>5 20 28 58 51 18</td>
<td>4.02</td>
<td>1.24</td>
</tr>
<tr>
<td>The above measurement behaviors are successfully being used to support improvements within my college</td>
<td>168</td>
<td>7 16 36 42 48 20</td>
<td>3.99</td>
<td>1.32</td>
</tr>
<tr>
<td>The above problem-solving behaviors are successfully being used to support improvements within my college</td>
<td>168</td>
<td>5 23 38 46 44 14</td>
<td>3.84</td>
<td>1.27</td>
</tr>
<tr>
<td>The above communication behaviors are successfully being used to support improvements within my college</td>
<td>180</td>
<td>5 26 42 47 47 13</td>
<td>3.80</td>
<td>1.26</td>
</tr>
<tr>
<td>Our institutional vision successfully supports improvements within my college</td>
<td>166</td>
<td>9 31 25 45 38 18</td>
<td>3.76</td>
<td>1.42</td>
</tr>
</tbody>
</table>

*Note: Not all participants responded to every behavioral statement.*

Likert Scale=(1) Never – (6) Always

To determine to what extent leaders felt successful with specific performance indicators, respondents were asked to report on measures of success using a scale from
not successful (1) to highly successful (6). As shown in Table 11, leaders identified “demand by employers for students” (M=4.43), “student learning outcomes” (M=4.42), and “faculty teaching performance” (M=4.36) as the areas where they perceived the most success, while “graduation rate of students” (M=3.93) and “retention rate of students” (M=3.77) were the areas where leaders perceived themselves to be the least successful.

Table 11

Leaders’ Beliefs as to Their College’s Perceived Success on Performance Indicators

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Likert Scale Number [1-6]</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand by employers for students</td>
<td>167</td>
<td>0 6 31 43 60 27</td>
<td>4.43</td>
<td>1.08</td>
</tr>
<tr>
<td>Student learning outcomes</td>
<td>168</td>
<td>0 8 25 48 30 7</td>
<td>4.42</td>
<td>1.04</td>
</tr>
<tr>
<td>Faculty teaching performance</td>
<td>168</td>
<td>2 13 23 41 62 27</td>
<td>4.36</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2 7.8 13.7 24.4 36.9 16.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student satisfaction</td>
<td>168</td>
<td>2 4 25 63 60 14</td>
<td>4.29</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2 2.4 14.9 37.5 35.7 8.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputation of degrees and programs</td>
<td>167</td>
<td>3 13 25 49 50 27</td>
<td>4.26</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 7.8 15 29.3 30 16.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty service performance</td>
<td>167</td>
<td>3 14 24 40 68 18</td>
<td>4.26</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 8.4 14.4 24 41 10.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective program assessment</td>
<td>168</td>
<td>3 21 32 46 48 18</td>
<td>4.01</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8 12.5 19.1 27.4 28.6 10.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective curriculum assessment</td>
<td>168</td>
<td>5 19 30 50 50 14</td>
<td>3.97</td>
<td>1.24</td>
</tr>
<tr>
<td>Graduation rate of students</td>
<td>167</td>
<td>6 12 37 62 33 17</td>
<td>3.93</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.6 7.2 22.2 37.1 19.8 10.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retention rate of students</td>
<td>168</td>
<td>5 22 35 64 28 14</td>
<td>3.77</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 13.1 20.8 38.1 16.7 8.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Likert scale – 1=not successful, 6=highly successful

Note: Not all participants responded to every behavioral statement.

Reliability and Consistency Analysis

The next step in analyzing the data was to conduct a confirmatory factor analysis. This was appropriate because the behavioral statements used to construct the survey
questions were derived from extant literature and were statements associated with specific learning organization behaviors used to determine the variables (Gall, Gall, & Borg, 2007). Factor analysis is used to determine that sets of questions are measuring the same factor; it is “designed to determine the number of distinct constructs needed to account for the pattern of correlations among a set of measures” (Fabrigar & Wegener, 2012, p. 3). As noted in Chapter 3, each set of behavioral statements, with the exception of the last statement related to improvement, under the six learning organization principles was intended to be collapsed into one single scaled variable for each of the principles: learning, communication, measurement, problem-solving, structure, and vision. The statements related to improvement were to be collapsed into a single scaled variable labeled perceived improvement, and the statements related to the leaders’ perception of their success with performance indicators was to be combined into the scaled variable of perceived success. The results of the factor analysis showed that for learning, communication, problem-solving, structure, vision and improvement, a single concept was being measured by the behavioral statements. For measurement and success, however, the statements combined to reflect two different concepts. To ensure a single factor was measured, the statement “the college conducts course evaluations” was removed for measurement and the performance indicator “retention rate of students” was removed for perceived success.

In the factor analysis, statements five and six in the measurement question were both confirmed as loading on the same factor, although a different factor from the remaining statements. Correlation of these two behavioral statements showed a strong relationship ($r=.838$). I made the decision to remove “retention rate of students” and
keep “graduation rate of students,” assuming that the graduation rate reflected the retention of a percentage of the student body. Removing only one of the statements, rather than both, resulted in the concept loading on a single factor.

Following the factor analysis, a reliability analysis was conducted to ensure that the newly-created variables had internal reliability. Gliem and Gliem (2003) noted that “the closer Cronbach’s alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale” and “that an alpha of .8 is probably a reasonable goal” (p. 87).

Ruth (2010) noted that, for research with high stakes or on which decisions would be based, the alpha should be closer to .90. The results of the Cronbach’s alpha showed that the internal reliability of each of the scaled scores was above .80 for all and above .90 for most, as shown in Table 12, and that the newly-created variables were acceptable.

Table 12

Results of Cronbach Alpha for Newly-Created Collapsed Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>.925</td>
<td>7</td>
</tr>
<tr>
<td>Communication</td>
<td>.904</td>
<td>6</td>
</tr>
<tr>
<td>Measurement</td>
<td>.889</td>
<td>7</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>.907</td>
<td>5</td>
</tr>
<tr>
<td>Structure</td>
<td>.866</td>
<td>5</td>
</tr>
<tr>
<td>Vision</td>
<td>.936</td>
<td>5</td>
</tr>
<tr>
<td>Perceived Improvement from Use of the Principles</td>
<td>.950</td>
<td>6</td>
</tr>
<tr>
<td>Perceived Success on Performance Indicators</td>
<td>.915</td>
<td>9</td>
</tr>
</tbody>
</table>

The descriptive statistics for the newly-created variables can be found in Table 13. Of the six learning organization principles, the most prevalent principle was learning (M=4.36), followed by measurement (M=4.24), then structure (M=4.24), communication
(M=3.95), problem-solving (M=3.92), and vision (M=3.69). The mean score for perceived improvement was 3.90, while the mean score for perceived success was 4.20.

Table 13

Descriptive Statistics for the Newly-Created Collapsed Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>169</td>
<td>1.57</td>
<td>6.00</td>
<td>4.36</td>
<td>.968</td>
</tr>
<tr>
<td>Measurement</td>
<td>169</td>
<td>1.57</td>
<td>6.00</td>
<td>4.24</td>
<td>.959</td>
</tr>
<tr>
<td>Structure</td>
<td>169</td>
<td>1.40</td>
<td>6.00</td>
<td>4.14</td>
<td>1.00</td>
</tr>
<tr>
<td>Communication</td>
<td>169</td>
<td>1.50</td>
<td>6.00</td>
<td>3.95</td>
<td>.962</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>169</td>
<td>1.00</td>
<td>6.00</td>
<td>3.92</td>
<td>1.045</td>
</tr>
<tr>
<td>Vision</td>
<td>169</td>
<td>1.00</td>
<td>6.00</td>
<td>3.69</td>
<td>1.260</td>
</tr>
<tr>
<td>Perceived Improvement</td>
<td>169</td>
<td>1.00</td>
<td>6.00</td>
<td>3.90</td>
<td>1.168</td>
</tr>
<tr>
<td>Perceived Success</td>
<td>169</td>
<td>1.78</td>
<td>6.00</td>
<td>4.20</td>
<td>.892</td>
</tr>
</tbody>
</table>

Relationship among Variables

I conducted a correlation analysis using SPSS on the variables to determine the relationship between each one (Ruth, 2010). There was some missing data within the 169 more complete cases. In these instances, the mean score for the question was used in the blank cells to facilitate data analysis. The degree of relationship is indicated by a correlation coefficient ranging from -1.00 to +1.00; a negative correlation coefficient indicates a negative relationship, while a positive correlation coefficient indicates a positive relationship. The closer the coefficient is to 1.00 determines the strength of the relationship. It is important to note that just because variables are highly correlated does not mean that one item or group of items is the cause of change in other variables (Ruth, 2010).

A Pearson correlation analysis showed the variables for the six learning principles, perceived improvement from information gained through the use of the principles, and perceived success on performance indicators were positively correlated to
one another (p<0.001), as shown in Table 14. What this means is that as the scores for
the presence of each of the six learning principles increases, it is expected that the scores
on the other variables, along with *perceived improvement* and *perceived success*, will also
increase. The variables of *perceived improvement* from the use of the learning
organization principles and *perceived success* on the performance indicators were also
positively correlated, indicating that the perception of success in performance areas is
positively correlated to the perception of improvement. The correlation coefficients
demonstrate moderate to moderate-high relationships between the variables. Normal
distribution of the data was assumed; however, nonparametric correlations were also
conducted. The principles were also positively correlated (p<0.001) under Kendall’s
tau_b and Spearman rho statistical tests.

Table 14

*Learning Organization Principle, Perceived Perception of Improvement through Use of
the Principles, and Perceived Performance on Success Indicator Variables: Pearson
Correlations (N=169)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Communication</td>
<td>.761**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Measurement</td>
<td>.684**</td>
<td>.762**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Problem-solving</td>
<td>.713**</td>
<td>.782**</td>
<td>.820**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Structure</td>
<td>.669**</td>
<td>.753**</td>
<td>.706**</td>
<td>.771**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Vision</td>
<td>.660**</td>
<td>.717**</td>
<td>.725**</td>
<td>.789**</td>
<td>.761**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Perceived Improvement</td>
<td>.785**</td>
<td>.817**</td>
<td>.854**</td>
<td>.912**</td>
<td>.836**</td>
<td>.848**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Perceived Success</td>
<td>.665**</td>
<td>.608**</td>
<td>.630**</td>
<td>.670**</td>
<td>.712**</td>
<td>.584**</td>
<td>.707**</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Regression Analysis to Predict Outcomes between Variables

A standard multiple regression analysis was performed using SPSS to determine
which of the independent variables, the six learning organization principles – *learning,*
communication, measurement, problem-solving, structure, and vision -- were predictor variables for the dependent variable of perceived improvement from information gained from the use of the learning organization principles. The results of the regression analysis showed that learning, measurement, problem-solving, structure, and vision could be used to predict perceived improvement from the information gained from the use of the learning organization principles, as shown in Table 15. Problem-solving, followed by measurement and structure, were the primary predictors. Communication was not a statistically significant variable. The combination of the five independent variables explained 92% of the variation in perceived improvement for the academic leaders (R^2=.921, F(6, 162)=313.6, p<.001).

The multiple regression analysis leads to an equation which can be used to make predictions about the interaction of the independent variables and that interaction’s influence on the dependent variable. Perceived improvement from information gained through the principles is equal to -0.975 +0.182(Learning) + 0.232(Measurement) + 0.397(Problem-Solving) + 0.200(Structure) + 0.175(Vision). What this means is that, holding the other variables constant, it is expected that if the perception of problem-solving, for example, were to increase by one point on a scale, then perceived improvement would be expected to increase by .397.

What this suggests for the academic leaders is that using the learning organization principles would improve their perception of perceived improvement through the use of the principles. As noted earlier, communication was not statistically significant as a predictor of perceived improvement, despite attention paid to sharing knowledge. This does not mean, however, that this principle can be ignored. While this is surprising, one
reason for this may be that communication is necessary for the other five learning organization principles to be effective within organizations. Continuing to build learning organization principles within organizations is valuable for increasing the leaders’ perception about the use of the principles towards perceived improvement.

Table 15

Multiple Regression Analysis for Learning Organization Principles as Predictors of Perceived Successful Improvement from Information Gained Through the Principles

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>.182</td>
<td>.044</td>
<td>4.163</td>
<td>.000*</td>
</tr>
<tr>
<td>Communication</td>
<td>.018</td>
<td>.052</td>
<td>.339</td>
<td>.735</td>
</tr>
<tr>
<td>Measurement</td>
<td>.232</td>
<td>.051</td>
<td>4.576</td>
<td>.000*</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>.397</td>
<td>.054</td>
<td>7.377</td>
<td>.000*</td>
</tr>
<tr>
<td>Structure</td>
<td>.200</td>
<td>.046</td>
<td>4.313</td>
<td>.000*</td>
</tr>
<tr>
<td>Vision</td>
<td>.175</td>
<td>.037</td>
<td>4.734</td>
<td>.000*</td>
</tr>
<tr>
<td>R²</td>
<td>.921</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>313.618*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

I conducted another multiple regression analysis using SPSS to determine whether any of the independent variables, the six learning organization principles -- learning, communication, measurement, problem-solving, structure, and vision -- could be used to predict the academic leaders’ perception of perceived success on the performance indicators.

The results of the analysis show that two of the variables, learning and structure, were predictive of the dependent variable of perceived success on performance indicators, as shown in Table 16. The combination of these two independent variables explained 59% of the variation in perceived success on the performance indicators for the academic leaders (R²=59.1, F(6, 162)=38.9, p<.001). A significant regression equation was discovered, as learning and structure were found to be predictive of the dependent
variable, *perceived success*. The other four independent variables, *communication*, *measurement*, *problem-solving* and *vision*, were not significant. For the regression equation, *perceived success* on the performance indicators is equal to .920 + 0.299(Learning) + 0.407(Structure). What this means is that, holding the other variables constant, it is expected that if the perception of *structure*, for example, were to increase by one point on a scale, then *perceived success* would be expected to increase by .407. What this suggests is that academic leaders who improve the presence of learning and structure behaviors in their organizations could expect to see an increase in their *perceived success* on the performance indicators. What this also means is that changes in *measurement*, *communication*, *problem-solving* and *vision* behaviors will have less of an impact on *perceived success* on performance indicators but should not be ignored all together.

Table 16

*Multiple Regression Analysis for Learning Organization Principles as Predictors of Perceived Success on Performance Indicators*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>.299</td>
<td>.076</td>
<td>3.946</td>
<td>.000*</td>
</tr>
<tr>
<td>Communication</td>
<td>-.130</td>
<td>.091</td>
<td>-1.430</td>
<td>.155</td>
</tr>
<tr>
<td>Measurement</td>
<td>.115</td>
<td>.088</td>
<td>1.304</td>
<td>.194</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>.154</td>
<td>.093</td>
<td>1.655</td>
<td>.100</td>
</tr>
<tr>
<td>Structure</td>
<td>.407</td>
<td>.080</td>
<td>1.304</td>
<td>.000*</td>
</tr>
<tr>
<td>Vision</td>
<td>-.078</td>
<td>.064</td>
<td>-1.220</td>
<td>.224</td>
</tr>
<tr>
<td>R²</td>
<td>.591</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>38.991*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

**Suggestions from Leaders: Open-Ended Responses**

The academic leaders were asked to respond to one open-ended question, “What suggestions do you have as to what is necessary for your college to become a stronger
learning organization?” There were 75 responses, with the full verbatim responses to the question found in Appendix D. The responses were reviewed in two ways. The first review examined which learning organization principles were referred to by the leaders in their comments. As shown in Table 17, the majority of the suggestions related to learning (41.3%), followed by structure (34.7%), communication (30.7%), vision (12.0%), problem-solving (9.3%), and measurement (6.7%).

Table 17

<table>
<thead>
<tr>
<th>Principle</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>31</td>
<td>41.3</td>
</tr>
<tr>
<td>Structure</td>
<td>26</td>
<td>34.7</td>
</tr>
<tr>
<td>Communication</td>
<td>23</td>
<td>30.7</td>
</tr>
<tr>
<td>Vision</td>
<td>9</td>
<td>12.0</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>Measurement</td>
<td>5</td>
<td>6.7</td>
</tr>
</tbody>
</table>

The suggestions were then reviewed to determine common themes among the various comments, and 13 themes emerged in the review. Table 18 shows each of the themes, the number of responses, and the percentage of responses which contained the theme. The most prevalent theme related to academic excellence (14 comments, 18.7%). The leaders suggested that higher education institutions could develop stronger learning organization principles by focusing on improving academic excellence. For example, one respondent wrote, “intentional focus on academic excellence – recruitment of students from top 10% of their high school classes.”

The second most common suggestion related to leadership (12 responses, 16%). Leaders suggested that a change in leadership, personnel or strategies, would improve
their institution’s ability to be a learning organization. For example, one respondent suggested a change to stronger leadership was necessary for the institution: “We also need stable and stronger leadership at the VP and Presidential levels: Our former Pres. provided little leadership, which left the Chief Academic Officer in a sort of limbo where he didn’t know what he was empowered to do.” Another suggested that current leadership should adopt new strategies: “Organizational leaders should adopt a model of change/improvement that starts with the stake-holders rather than the top-down model that is currently used.”

Table 18

Suggestions for Increasing the Presence of Learning Organization Principles through Various Organizational Changes (From Open-Ended Responses)

<table>
<thead>
<tr>
<th>Area Where Change is Needed</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic excellence</td>
<td>14</td>
<td>18.7</td>
</tr>
<tr>
<td>Leadership</td>
<td>12</td>
<td>16.0</td>
</tr>
<tr>
<td>Hiring practices/personnel issues</td>
<td>10</td>
<td>13.3</td>
</tr>
<tr>
<td>Increased faculty involvement</td>
<td>8</td>
<td>10.7</td>
</tr>
<tr>
<td>Student recruitment (quality and number)</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>Funding</td>
<td>6</td>
<td>8.0</td>
</tr>
<tr>
<td>Program, courses, curriculum</td>
<td>6</td>
<td>8.0</td>
</tr>
<tr>
<td>Time</td>
<td>6</td>
<td>8.0</td>
</tr>
<tr>
<td>Collaboration/interdisciplinary interaction</td>
<td>4</td>
<td>5.3</td>
</tr>
<tr>
<td>Increased respect between stakeholders</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Increased participation in decision-making</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Increased student involvement</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Use Systems Thinking</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Next, the third most common theme related to hiring practices and personnel issues (10 comments, 13.3%). The respondents were concerned about the number and quality of new hires for both faculty and administration. One respondent suggested “higher standards for hiring faculty”; another suggested “we need ot [sic] have administrators willing to remove personel [sic] from the faculty who are not successful
teachers/collegues [sic].” There were also concerns about faculty promotions: “Hire new faculty, and promote probationary faculty, who understand and support the mission and identity of the university.”

The fourth most common theme related to increasing the involvement of the faculty (8 responses, 10.7%). Leaders suggested that leadership should involve faculty, including those in mid-management positions such as department heads, in decision-making. For example, one leader suggested for administration to “continue to involve faculty in new course creation and implementation,” while another encouraged administration to acknowledge the contributions of the faculty members.

The remaining nine themes related to faculty involvement, decision-making, respect, student involvement, leadership, programs and courses, student recruitment, systems thinking, and time. The frequency and percentages for each of these suggestions can be found in Table 18.

**Summary**

This chapter detailed the results of the web-based questionnaire, Academic Learning Organization Survey. The frequencies and descriptive statistics for each set of questions were provided, along with the results of the correlation and multiple regression analysis performed on the data. The chapter also includes an analysis of the responses to the open-ended question and the explanation of the themes revealed within the responses. The next chapter examines how these results relate to each of the research questions. Significant findings for each question will be discussed.
CHAPTER V

KEY FINDINGS AND DISCUSSION

This chapter examines the results of the web-based Academic Learning Organization Survey completed by 180 academic leaders in general education disciplines from universities and colleges with a professions focus. My study’s intent was to understand to what extent these leaders felt specific learning organization principles were present within their organizations, and how these principles were linked to perceived improvements and success on specific performance indicators.

An earlier chapter reviewed the specific literature used to derive the six learning organization principles (learning, communication, measurement, problem-solving, structure, and vision), explained existing theories about learning organizations, and discussed the current environment in higher education of quality, accountability, and assessment. The literature also demonstrated the need for continued study in learning organization principles and behaviors, especially of various organizations and leaders at different levels within organizations. Particularly, the literature demonstrated a need for this specific group of leaders to be surveyed separately from their peer leaders at different types of institutions.

The instrument used for this study was developed using behaviors derived from extant literature on learning organizations. For each of the six learning organization principles, leaders were asked to indicate the presence of a set of behaviors using a six-point visual scale ranging from never (1) to always (6). The leaders were also asked to indicate to what extent information gained from the presence of these behaviors was linked to perceived improvement within their organizations. The questionnaire also
included a list of common performance indicators, such as student retention and graduation rates, which were used to determine the extent leaders felt they were successful in these areas. For these, the leaders were asked to respond using a six-point visual scale from 1 (not successful) to 6 (highly successful). One open-ended question asked leaders to provide suggestions as to how their academic units could be stronger learning organizations. Additional demographics questions gathered information about this group of leaders.

This chapter profiles in greater detail the findings of the study, and discusses how these findings relate to previous studies of academic leaders and efforts regarding the existence of learning organization behaviors in various organizations. Also, this chapter examines how the information gained from my study helps to answer the research questions set forth in Chapter I. Overall, this chapter develops an understanding of how the information gained from the survey adds knowledge to the overall understanding of the presence and use of learning organization principles in higher education.

**Key Findings**

Department heads were the primary respondents to my survey (66.5%), and this is representative of the population who received the email invitation to participate, as 69.8% of the names and email addresses collected for the study were identified as a department chair or department head. The disciplines represented in the study are fairly balanced, with arts and humanities (27.2%) having the largest number of respondents; this was expected as it represented the broadest category of the four major categories identified within the responses: science, math, social sciences, and arts and humanities. Within the arts and humanities category, the leaders represented departments with such labels as
music, art, dance, English, foreign or world languages, communications, multimedia, writing, humanities, liberal arts, and theater. Social Sciences (25.9%) also was a broad category, with department chairs identifying disciplines such as religion, philosophy, government, history, psychology, criminal justice, political science, and cultural studies. In sum, each of the disciplines was fairly represented among all respondents for this study.

For institution type, the respondents were largely from small (1,000-2,999), private, non-profit institutions. More than half of the respondents (54.3%) identified the size of their institutions to be between 1,000 and 2,999 students; mid-sized institutions (2,000-9,999) were also well represented within the study (28%). For a complete look at the range of institution size, please see Table 3 in Chapter IV. While the specific population of the institutions was not known from the original collection of email addresses, colleges within the Carnegie designation of “professions focus” tend to be smaller organizations, so this number is not surprising.

It was expected that the majority of the respondents to my study would be from private, non-profit organizations, since 146 institutions of this type (58%) were on the original list. Individuals from this type of institution represented 75% of respondents.

The second most common type of institution to be surveyed was for-profit institutions, as there were 78 (31%) of these institutions on the original list. However, there were only nine respondents from this type of institution, representing 5.5% of the overall respondents for the study. This is because the majority of for-profit institutions identified as being part of the population for my study did not have individuals identified in dean or department head roles or did not have email addresses available for the
individuals who were identified.

While for-profit institutions are under-represented within this study, public institutions are slightly over-represented. Public institutions represented 11% (27 colleges) of the institutions within the Carnegie categories used for this study, and the response rate for individuals from these institutions was 19.4%. One reason for this may be the higher number of academic leaders identified for each of the public institutions and the wider availability of contact information. See Table 19 for a comparison of the original list of organizations to the number of respondents who identified as belonging to these various institution types. This table shows the discrepancy between the institution types on the original email list and the institution types reported by the respondents.

Based on the demographic data reported by respondents, information from my study likely is most relevant and usable to academic leaders from small or mid-sized, non-profit, private institutions that emphasize professions-focused degree programs.

**Table 19**

*Descriptive Information for Population Institutions and Respondent Institutions*

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Population</th>
<th>Respondent</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td>of</td>
<td></td>
<td>of respondents</td>
<td>from this institution type</td>
</tr>
<tr>
<td></td>
<td>institutions that were part of original email list</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private, non-profit</td>
<td>146</td>
<td>58</td>
<td>124</td>
<td>75</td>
</tr>
<tr>
<td>Private, for-profit</td>
<td>78</td>
<td>31</td>
<td>9</td>
<td>5.5</td>
</tr>
<tr>
<td>Public</td>
<td>27</td>
<td>11</td>
<td>32</td>
<td>19</td>
</tr>
</tbody>
</table>

*Note: The total number of institutions was 251; there were 165 individuals who responded to this demographic question.*

**The Presence of the Learning Organization Principles**

The first part of the Research Question 1 asks *to what extent do these leaders*
perceive their colleges to be engaged in the six principles of a learning organization?

The academic leaders were asked to respond to a series of behavioral statements, organized under each learning organization principle, with a six-point visual scale ranging from (1) never to (6) always. For the purpose of this analysis, the learning organization principle was considered to be present within organizations if the mean for the newly-created variable from the scaled scores was greater than 4.0. Within their organizations, the academic leaders reported that learning (M=4.36), measurement (M=4.24), and structure (M=4.14) were the only three of the six learning organization principles present, according to the specified threshold of needing a mean of at least 4.0. Two other principles, communication and problem-solving, had a mean that exceeded 3.9 (M=3.95 and M=3.92) and may be close enough to be considered as moderately present within those organizations (see Table 13, Chapter IV). The least identified principle was vision (M=3.69), indicating that the academic leaders felt that of all of the learning organization principles, vision was the principle whose related behaviors were least evident within their organizations.

**Key Finding 1: Learning Organization Principles are Somewhat Present**

Looking beyond the means for each of the scaled scores, I examined the overall range of scores for each principle’s scaled responses to see what percentage of academic leaders reported which principles to be present within their organizations. I again used the mean score of 4.0 for all responses for each observation as a threshold for whether the leaders perceived enough behaviors as present to demonstrate the existence of the principle. Table 20 details each scaled variable and the number and percentage of responses below and above the 4.0 threshold. For all but one of the principles, more than
50% of the academic leaders reported the principle to be present within their organizations. This leads me to conclude that the learning organization principles are perceived to be somewhat present by the respondents. This finding affirms Khasawneh’s study (2011) in which the author found learning organization principles to be moderate to high among the faculty at a Jordanian university, and Ali (2012) who reported moderate levels of the presence of learning organization principles at an international higher education institution. This also adds to Bak’s (2012) findings in which the presence of the principles differed by gender, rank, and institutional type. My study adds to an understanding as to how institutional type could affect individual leaders’ perceptions of the presence of the principles of a learning organization within their institutions.

For the principle of learning, 71% of the academic leaders reported the presence of learning behaviors within their organizations. This is a strong indicator that learning, based on the behaviors used to measure this variable, is perceived by most of the academic leaders to be the principle most present within their organizations based on the stated behaviors. The principles of measurement (60%) and structure (62%) are also perceived to be highly represented by the academic leaders within their organizations. A slight majority of academic leaders reported the presence of communication (53%) and problem-solving (53%); however, the frequency of each demonstrates that these academic leaders are nearly split on their beliefs about these two principles. The principle of vision (46%) is clearly not perceived by the majority to be as present within their organizations. Because the range of the means for all six of the learning organization principles is fairly close (3.69-4.36), viewing the responses in this way provides a clearer picture of the perception of the presence of the principles.
Table 20

*Summary of Learning Organization Principles (4.0-6.0 Mean)*

<table>
<thead>
<tr>
<th>Scaled Variable</th>
<th>Frequency</th>
<th>Mean</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>120</td>
<td>4.36</td>
<td>71</td>
</tr>
<tr>
<td>Structure</td>
<td>104</td>
<td>4.14</td>
<td>62</td>
</tr>
<tr>
<td>Measurement</td>
<td>102</td>
<td>4.24</td>
<td>60</td>
</tr>
<tr>
<td>Communication</td>
<td>89</td>
<td>3.95</td>
<td>53</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>89</td>
<td>3.92</td>
<td>53</td>
</tr>
<tr>
<td>Vision</td>
<td>78</td>
<td>3.69</td>
<td>46</td>
</tr>
</tbody>
</table>

N=169; Likert scale – 1=never, 6=always

In examining the presence of the learning organization principles, I also wanted to see which of the specific learning organization principles were perceived to be most prevalent within the organizations (*learning, communication, measurement, problem-solving, structure* and *vision*). I again used the threshold of a mean of 4.0 on the individual responses to the behavioral statements under each learning organization principle.

**Learning.** Within *learning*, the principle most identified by the leaders to be present in their organizations, the most prevalent learning organization behaviors the leaders identified was that “individuals are encouraged to share ideas,” (M=4.89) “to engage in continuous learning,” (M=4.88) and “serve as resources for each other” (M=4.68). This concurs with arguments made by learning organization theorists that continuous learning and a learning culture were necessary ideals for the learning organization (Dill, 1999; Garvin, 1994; Kline & Saunders, 1998; Senge, 1990a). It also affirms prior beliefs that in a learning organization learning is used to change behavior (Dill, 1999; Garvin, 1994) and individuals make use of others’ knowledge and experiences (Dill, 1999; Garvin, 1994). My study adds to the discussion of the study conducted by Griego, Geroy, and Wright (2000) who found that the presence of training...
and rewards for individuals led to those employees to perceive their work unit as a learning organization. The results of my study show that, for these academic leaders, a learning culture is present within their organizations and this learning culture contributes to the perceived improvement and success of their organizations.

From the open-ended question at the end of the survey, one leader shared an example as to how this person is creating opportunities for learning: “Within my school, I am creating interdisciplinary and cross disciplinary structures in order to engage faculty members to discuss differing perspectives.” The leaders also offered some praise for their institutions in this area which supports the quantitative analysis from my study and previous research and literature. One leader noted that “the faculty and administration are really involved in looking into best practices in teaching and serving students.” Overall, these suggestions indicate that, for the academic leaders who responded to this question, learning should be the highest priority within their organizations and is the greatest indicator, for them, of their institutions’ success as a learning organization. This aligns with the findings of the multiple regression analysis, discussed later in this chapter, which showed that learning was a strong predictor for perception of improvement through the use of the learning organization principles.

Structure. Under the learning organization principle of structure, the academic leaders identified four of the five behaviors as being present within their organizations by exceeding the mean of 4.0. In general, this suggests that the organizations of the academic leaders have a structure in place which supports learning organization principles to some extent. The leaders reported that they “can see how the parts of the college effectively interact” (M=4.41), “structure permits communication between
academic disciplines” (4.29), “faculty work across discipline units” (4.07), and “committees address quality, assessment, and standards issues within my college” (M=4.29). This affirms Dill’s (1999) assertion that communication between academic units is essential for the creation of a learning organization for higher education. It also affirms Senge (1990b) and Kline and Saunders (1998) who argued that leaders within organizations must be able to see how the parts of the structure interact with one another.

I had previously argued that colleges with a professions focus may be more likely to structure themselves in such a way as to encourage learning organization behaviors within their organizations. The leaders confirm this supposition. The statement regarding the committee work supports Dill’s (1999) argument that committees are a necessary structural element in an academic institution to permit individuals to work together, especially across discipline lines and contradicts the author’s beliefs that higher education institutions’ structures prohibit learning organization behaviors. It also confirms Birdthistle (2008) who identified weaknesses in structure as limiting an organization from becoming a learning organization and supports beliefs that appropriate structures were necessary for change to take place (Wong & Tierney, 2001).

**Measurement.** Under the measurement behaviors, the leaders did indicate a high level of engagement with measurement behaviors, reporting means of above 4.0 for six of the eight behavioral statements, including “individuals are encouraged to use data for decision-making” (M=4.39) and student (M=4.36) and faculty-related performance measures (M=4.15) are being used for making decisions within the organizations. The leaders also indicated that “there are practices in place to measure success within the college” (M=4.30). For the final behavioral statement, which is included in the variable
used to determine whether information gained form the principles is used for perceived improvement, the academic leaders were not strong in their belief that “measurement behaviors are successfully being used to support improvements within my college” (M=3.99).

The findings within the measurement section dispute Ewell, Paulson and Kinzie’s (2011) study which showed that arts and humanities, natural sciences, and social science departments reported less assessment. However, it also affirms that academic leaders at this level were collecting student and faculty-related assessment information. Ewell (2008, 2009) had found that assessment relies on multiple feedback loops and reference points over time, and my study adds to these findings. These findings also support Abate, Stamatakis, and Haggett’s (2003) study which argued that higher education institutions must continue to work on improving assessment methods, collecting data, and using that data to drive change within their organization. Abate et al. (2003) had argued that higher education had previously not been successful in measurement behaviors and using information for performance improvement.

The comments from the academic leaders on the open-ended question add depth to this category. The academic leaders are collecting data and using the information; however, one leader asked for “consistent packaging and dissemination of data that impacts decision-making. Availability of information alone isn’t adequate. Time must be spent sharing data regularly from the institutional level.”

**Communication.** Previous research and literature on learning organizations had stressed the importance of communication. Garvin (1994) argued that knowledge must be shared throughout all components of the organization, and Kline and Saunders (1998)
stated that communication must exist between workers and stakeholders. However, neither of these behaviors was identified as being present by the academic leaders within my study. In fact, the leaders reported only three of the six behaviors to be present within their organizations. The most prevalent behavior was “individuals ask one another for support” (M=4.48); this affirmed the assertion of (Senge, 1990b). The next most prevalent behavior was “knowledge is shared through oral reports” (M=4.13) which was identified by Garvin (1994) as being necessary. The leaders also reported that “individuals can understand how they can communicate with others within the college” (M=4.02).

The least prevalent behavior was “communication exists between external stakeholders and members of the college” (M=3.41). One academic leader affirmed this concern and commented that the quality of communication varied between the hierarchical structure of his/her institution: “The Arts & Sciences College has good communication because we have a Dean who makes communication a priority, but communication from points above him in the hierarchy is poor to nonexistent.”

From the open-ended question, one leader confirmed that individuals are being offered opportunities to learn from one another, noting that workshops used for a strategic planning process “are helping us with the transition to be a more effective, collaborative organization.” Others suggested that “more collaboration between colleges at the university” and “more purposeful communication between schools that are outside the College of Liberal Arts & Sciences” would improve their organization’s capacity to be a learning organization.

**Problem-Solving.** The academic leaders identified only two of the five
behavioral statements about problem-solving as being present within their organizations: “individuals identify problems to be solved” (M=4.50) and “knowledge is used for problem-solving” (M=4.05). The academic leaders also identified challenges with this principle in the open-ended question. One leader noted that “we need data from which to make data-driven decisions; at this point, we collect data but have major problems assessing it and using it.” Another reported that the organization should “continue to focus on assessment data and other evidence to drive decisions,” and one lamented the time it takes for decisions to come about, asking for “quicker decision making.” The thoughts here affirm Watkins (2005) claim that higher education institutions need to work to manage problems, but could not affirm Garvin’s (1994) argument that a learning organization should have a systematic way to solve problems using data. In fact, the focus on the lack of data-driven decision-making supports Garvin’s overall argument that higher education lacks learning organization principles.

**Vision.** Kline and Saunders (1998) had argued that individuals within learning organizations are willing to take risks towards the institutional vision and understand how they can contribute to the overall vision of the organization. The results of this study show that while the academic leaders did feel they were encouraged to contribute to the vision, they did not report the other vision behaviors to be present. In fact, only one of the behaviors achieved the threshold mean of 4.0, meaning: “Members of the college are encouraged to contribute toward the institutional vision” (M=4.06). For the most part, vision as a learning organization construct is not present within the academic colleges of the leaders who participated in the study. Senge (1990a, 1990b) also felt that vision was important and that leaders needed to have positive, rather than negative, views of the
vision. The academic leaders who responded to this survey indicated that individuals generally did not focus on a positive rather than negative view of the institutional vision.

Key Finding 2: Academic Colleges can Exhibit Learning Organization Behaviors

In examining the learning organization principles, five of the six principles were clearly perceived by a majority of the academic leaders to be somewhat present within their organizations which leads me to conclude that general education colleges within professions-focused institutions do exhibit some of the behaviors of a learning organization. Table 21 shows which behaviors are identified as most prevalent and which are identified as less prevalent to provide an overall picture of the presence of the behaviors.

Garvin (1994) and Dill (1999) had argued that higher education institutions were not learning organizations because they did not possess the characteristics they identified as needing to be present within a learning organization. In examining these, most of the behaviors Garvin identified were identified by the academic leaders as being somewhat present within their organizations. First, Garvin posited that a higher education institution would have to use data to systematically solve problems. Even though the academic leaders acknowledge that data is not always used for problem-solving, the academic leaders did identify that “knowledge is used for problem-solving,” “individuals identify problems to be solved,” and that “individuals are encouraged to use data for decision-making.” The academic leaders also indicated that data is collected on programs and courses and that faculty and student-related performance data are used for decision making.
Table 21

*Most and Least Prevalent Learning Organization Behaviors*

<table>
<thead>
<tr>
<th>Principle</th>
<th>Most Prevalent Behaviors (Mean)</th>
<th>Least Prevalent Behaviors (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>• Individuals are encouraged to share ideas (4.89)</td>
<td>• Individuals are encouraged to study how others work and make use of their experiences (3.98)</td>
</tr>
<tr>
<td></td>
<td>• Individuals serve as resources for each other (4.68)</td>
<td>• Learning is consistently applied to change initiatives within the college (3.91)</td>
</tr>
<tr>
<td></td>
<td>• Individuals are encouraged to engage in continuous learning (4.66)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Best practices within the college are shared (4.22)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Learning is consistently applied to decision-making (4.02)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>• Individuals ask one another for support (4.48)</td>
<td>• Data is consistently shared with members of the college (3.93)</td>
</tr>
<tr>
<td></td>
<td>• Knowledge is shared through oral reports (4.13)</td>
<td>• Knowledge is shared through written reports (3.77)</td>
</tr>
<tr>
<td></td>
<td>• Individuals understand how they can communicate with others within the college (4.02)</td>
<td>• Communication exists between external stakeholders and members of the college (3.41)</td>
</tr>
<tr>
<td>Measurement</td>
<td>• The college conducts course evaluations (5.42)</td>
<td>• Data is accessible to members of the college for use in decision-making (3.89)</td>
</tr>
<tr>
<td></td>
<td>• The college conducts program evaluations (4.79)</td>
<td>• Individuals are encouraged to test existing knowledge (3.84)</td>
</tr>
<tr>
<td></td>
<td>• Individuals are encouraged to use data for decision-making (4.39)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Student-related performance indicators are used for decision-making (4.36)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• There are practices in place to measure success within the college (4.30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Faculty-related performance indicators are used for decision-making (4.15)</td>
<td></td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>• Individuals identify problems to be solved (4.50)</td>
<td>• Processes are in place for change to occur within the college (3.96)</td>
</tr>
<tr>
<td></td>
<td>• Knowledge is used for problem-solving (4.05)</td>
<td>• Data, not assumptions, are used for solving problems within the college (3.75)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Quick-fixes and reactionary decisions are avoided (3.33)</td>
</tr>
<tr>
<td>Structure</td>
<td>• As a leader, I can see how the parts of the college effectively interact (4.41)</td>
<td>• Others understand how parts within the college effectively interact (3.64)</td>
</tr>
<tr>
<td></td>
<td>• Our structure permits communication between academic disciplines (4.29)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Committees address quality, assessment, and standards issues within my college (4.29)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Faculty work across discipline units (4.07)</td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>• Members of the college are encouraged to contribute toward the institutional vision (4.06)</td>
<td>• The college as a whole contributes to the institutional vision (3.84)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Everyone feels an ownership of the institutional vision (3.40)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members of the college are encouraged to take risks towards achieving the long-term institutional vision (3.52)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Individuals within the college focus on positive, rather than negative, views of the institutional vision (3.62)</td>
</tr>
</tbody>
</table>

*Note: Prevalence was determined by the mean score >4.0*
Garvin (1994) next argued that institutions needed to have an experimental process for discovering and evaluating knowledge. While this behavior was not specifically identified on the questionnaire, the academic leaders did report that “individuals are encouraged to engage in continuous learning.” The next three behaviors relate to knowledge. Garvin had argued that organizations must make use of prior experience, use others’ knowledge and experiences, and share knowledge throughout the organization. The academic leaders reported that they are “encouraged to share ideas,” “serve as resources for each other,” and that “best practices within the college are shared.” While overall institutions in higher education may not behave as learning organizations, the academic colleges whose leaders responded to this study do reflect some of the practices of a learning organization as detailed by Garvin.

This information also disputes White and Weathersby (2005), who had argued that the structure and culture of higher education institutions prevent them from becoming learning organizations, although they were not as specific in suggesting what learning organization behaviors would have to be present for this to change. This also disputes Hunter-Johnson and Closson (2012) who found instructors in their academic organization did not perceive the group to be a learning organization, and Holyoke, Sturko and Wood (2012) who had argued that a learning organization was not found at the departmental level.

Dill (1999) also posited specific behaviors that would be necessary for academic institutions to be learning organizations, and the academic leaders who responded to the survey reported that the majority of his behaviors were identified by the leaders to be somewhat present within their organizations. He argued that institutions needed to also
use systematic problem solving, which was not identified by the leaders as being present although “knowledge is used for problem-solving” and “learning is consistently applied to decision-making” were both present. Dill also identified learning from one’s self and learning from others and sharing knowledge with others as three important behaviors. The academic leaders agreed citing “individuals are encouraged to engage in continuous learning,” “individuals are encouraged to share ideas,” “individuals serve as resources for each other,” and “best practices within the college are shared.” The fifth behavior was that institutions implement new approaches. While this was not asked of the leaders, a majority of the leaders did report that they were “encouraged to test existing knowledge” (59.5% scored this behavior over 4.0). The leaders’ perceptions of their colleges are consistent with these beliefs about the behaviors necessary for a learning organization.

**Presence of Principles Related to Improvement and Success**

The second part of Research Question 1 asks “to what extent do these leaders perceive their colleges to be engaged in the use of these principles toward successful improvement?” The third part of Research Question 1 asks “to what extent do these leaders perceive their colleges to be engaged in the use of these principles toward perceived levels of success?”

**Key Finding 3: Improvement Behaviors not Widely Present**

For the most part, the leaders did not report the use of information gained through the learning organization principles to be linked to institutional improvements. In fact, only two of the six behavioral statements were identified by the academic leaders as being present within their organizations. The threshold of at least a 4.0 mean on the behavioral statement for the behavior to be considered in use within the organization was
used to determine presence. The leaders reported that “learning behaviors are successfully being used to support improvements in my college” (M=4.02) and “the organizational structure successfully supports improvements within my college” (M=4.03). Even so, these behaviors are only moderately present with means that barely pass the 4.0 threshold. Although this specific question relates only to the perception of the presence of the improvement behaviors, it is disconcerting that the academic leaders believe the learning organization principles to be somewhat present, but they do not believe that information gained from the use of the principles leads to improvement.

Research Question 2 takes a closer look at the link between perceived improvement and the use of the learning organization principles for perceived success on performance indicators later in this chapter.

One of the two behaviors noted by the academic leaders was the presence of learning. As noted earlier, most previous research recognized the presence of a learning culture in higher education. Previous researchers had asserted that assessment efforts in higher education should be linked to improvement (Asti & Antonio, 2012; Castiglia & Turi, 2011; Peterson, Wittstrom, & Smith, 2011), although the academic leaders in this study did not. Several studies also had found a link between assessment and improved performance (Klemic & Lovero, 2011; Scott & Dixon, 2009), and one study showed a positive link between learning and teaching improvement (Collie & Taylor, 2004). The other principle that was perceived to be used toward improvement within the organizations, as reported by the academic leaders, was structure. This was surprising as previous learning organization theorists and researchers had not found the structure within higher education to be conducive to learning organization principles (Dill, 1999;

**Key Finding 4: Leaders Perceive Themselves Successful on Performance Indicators**

For the third part of Research Question 1, the academic leaders were asked to report their *perceived success* for 10 common performance indicators. For the full details for this set of behavioral statements, see Table 11 in Chapter IV. Again, for the purposes of analysis, I used the mean of 4.0 as the threshold for determining the perception of success by the academic leaders for the performance indicator. The academic leaders identified themselves as successful on seven of the 10 performance indicators (see Table 25). To more closely examine the presence of the principle based on the 4.0 threshold, I looked at the frequency of responses for each behavior and looked at the range of responses for those <3.99 and those >4.0.

The leaders perceived themselves to be most successful in demand for their students by employers (M=4.43). They also perceived themselves to be successful at “student learning outcomes” (M=4.42), “faculty teaching performance” (M=4.36), “student satisfaction” (M=4.29), “reputation of degrees and programs” (M=4.26), and “faculty service performance” (M=4.26). The leaders also perceived their academic units to be successful in “effective program assessment” (M=4.01). The leaders perceived themselves to be less successful at “effective curriculum assessment” (M=3.97), “graduation rate of students” (M=3.93), and “retention rate of students” (M=3.77).

Even though only seven of the 10 principles met the threshold of 4.0, as Table 22 shows, a majority of academic leaders felt they were at least moderately successful with all of the performance indicators. This reflects the assertions of prior researchers (e.g., Abate, Stamatakis, & Haggett, 2003; Astin & Antonio, 2012; Ewell, 2008; Ewell, 2009;
Ewell, Paulson, & Kinzie, 2011; Klemic & Lovero, 2011; Peterson, Wittstrom, & Smith, 2011) that higher education institutions are engaged in a variety of assessment activities.

Table 22

Summary of Perceived Success on Performance Indicators (4.0-6.0 Mean)

<table>
<thead>
<tr>
<th>Performance Indicator (M)</th>
<th>Frequency</th>
<th>Mean</th>
<th>Percent Reporting Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand by employers for students</td>
<td>132</td>
<td>4.43</td>
<td>78</td>
</tr>
<tr>
<td>Student learning outcomes</td>
<td>136</td>
<td>4.42</td>
<td>80</td>
</tr>
<tr>
<td>Faculty teaching performance</td>
<td>131</td>
<td>4.36</td>
<td>78</td>
</tr>
<tr>
<td>Student satisfaction</td>
<td>138</td>
<td>4.29</td>
<td>82</td>
</tr>
<tr>
<td>Reputation of degrees and programs</td>
<td>128</td>
<td>4.26</td>
<td>76</td>
</tr>
<tr>
<td>Faculty service performance</td>
<td>128</td>
<td>4.26</td>
<td>76</td>
</tr>
<tr>
<td>Effective program assessment</td>
<td>113</td>
<td>4.01</td>
<td>67</td>
</tr>
<tr>
<td>Effective curriculum assessment</td>
<td>114</td>
<td>3.97</td>
<td>67</td>
</tr>
<tr>
<td>Graduation rate of students</td>
<td>112</td>
<td>3.93</td>
<td>66</td>
</tr>
<tr>
<td>Retention rate of students</td>
<td>106</td>
<td>3.77</td>
<td>63</td>
</tr>
</tbody>
</table>

Note: N=169; Likert scale – 1=not successful, 6=highly successful

Connections between Principles, Improvement, and Success

The second research question asks “to what extent are there connections between and among the perceived presence of the six principles of a learning organization, the usage of such principles for improvement, and levels of success?” The Pearson correlation analysis discussed in Chapter IV demonstrates there is a positive relationship between each of the six learning organization principles. Each principle was positively correlated to the other five, and all of the six learning organization principles were positively correlated to perceived improvement from information gained through the learning organization principles and the perceived success on performance indicators. The results were significant at the .0001 level.

The correlation coefficients detailed in Table 14 in the previous chapter showed a moderate to moderately-high relationship between all of the variables. The highest
correlation \((r=.912)\) was between problem-solving and perceived improvement gained through the use of the principles, suggesting that the academic leaders who responded to the survey report a strong relationship between problem-solving and perceived improvement. The lowest correlation \((r=.584)\) was between vision and perceived success of the academic leaders on specific performance indicators. This suggests that there is a much weaker relationship between vision and academic leaders’ perceptions of their performance on common success indicators. Overall, the correlation analysis suggests that for the academic leaders who responded to this survey, the learning organization principles defined in this study are related to one another and are linked to perceived improvement from information gained through the principles and perceived success on performance indicators.

**Key Finding 5: Five Principles are Predictors of Perceived Improvement**

The multiple regression analysis showed that five of the six learning organization principles could serve as predictors for perceived improvement from information derived from the presence of the learning organization principles. What this means is that with an increase in learning, measurement, problem-solving, structure and vision, the leaders could expect to see an increase in the amount of perceived improvement through the use of the learning organization principles. Leaders can expect to continue to see improvement within their academic units if investments are made in these areas. Academic leaders can benefit from intentionally working to create an environment in which these behaviors are encouraged within their academic units. This adds to Kumar’s (2005) study which showed that a high presence of organizational learning was a predictor of success in financial and knowledge performance, and Kumar and Idris’s
study (2006) which found leadership, embedded systems, and team learning to be predictors of knowledge performance. Collie and Taylor (2004) also had found that the presence of vision, knowledge management, a learning culture, and leadership led to teaching improvement.

These results suggest that academic leaders should continue to foster a learning culture within their environments and work towards linking learning to change initiatives. Leaders should also continue to identify problems to be solved and make sure that data is used and processes are in place for change to occur. The structure of the organization is also important because the structure has to allow for processes that are conducive to change and improvement and allow key stakeholders, including faculty and staff, to interact with one another. Deans and department heads should also foster environments that allow faculty and staff to take risks, both for accomplishing goals and testing knowledge; the culture of the organization must encourage risks without fear of punishment, and positive visions must be encouraged. Deans and chairs can help to drive positive viewpoints by modeling these for faculty.

**Key Finding 6: Two Principles are Predictors for Success**

A separate multiple regression analysis showed that two of the learning organization principles, *learning* and *structure*, could be used to predict perceived success on performance indicators. What this means is that academic leaders could expect to see improvement in their perception of success relevant to these performance indicators with an increase in the use of the behaviors to encourage learning within their academic units and a structure which encourages the learning organization principles. This affirms Ellinger, Ellinger, Yang, and Howton’s (2002) study, which found a link
between learning organization behaviors and knowledge and financial performance, and Ali (2012), who found significant correlations between learning organization behaviors and academic performance. In addition, it adds to Ali’s (2012) findings that learning organization principles explained variance in teaching and research performance and the presence of the learning organization behaviors was a predictor of research performance satisfaction among the respondents.

What these results suggest is that academic leaders who would like to increase their *perceived success* on performance indicators should encourage learning and structure behaviors within their organizations. For example, they may encourage individuals to study how others work and share knowledge and experiences. They should also help others to understand how the parts of the college interact. Changing the structure to encourage greater interaction would be beneficial, including finding ways to encourage interdisciplinary collaboration.

**Suggestions from Academic Leaders on Building a Learning Organization**

The final research question asked for an open-ended response as to “what suggestions do deans and chairs have as to what is necessary for their college to develop stronger learning organization principles.” There were 75 responses to this survey with an emphasis on *learning* (41.3%), *structure* (34.7%), and *communication* (30.7%). Many of the leaders made comments about more than one learning organization principle, and the comments often overlapped. The tone of many of the responses was that of frustration, indicated by such word choices as “dictatorial,” “fiefdom,” “fear,” “top down” and statements such as “serving as a department head at my university is meaningless.” These word choices and phrases indicate the level of dissatisfaction some
academic leaders have with the environment at their institutions. These word choices also suggest that improving learning organization behaviors within higher education could work to alleviate some of these challenges.

The suggestions offered for this question indicate the academic leaders know what is necessary to improve their organizations, but they feel hampered by leadership, existing structures and practices, a lack of information, and faculty and staff input. In addition, while the question asked for suggestions as to how the organizations could improve learning organization behaviors, many leaders provided evidence within their comments as the existing presence and use of the principles. These were incorporated into appropriate areas earlier in the chapter. For this section of the discussion, the emphasis will be on reporting key findings from the comments as they relate to the presence and use of the learning organization principles and what changes need to be made for the learning organization principles to be useful within their organizations. In sum, this section will focus on the key findings that emerged from the leaders’ open-ended comments and how these comments link with existing research about the presence and use of learning organization behaviors.

**Key Finding 7: More Emphasis on Learning is Needed**

Even though the academic leaders tended to respond favorably to the learning behaviors on the survey, suggestions to increase learning within their organizations were prevalent. Senge (1990a, 1990b) had emphasized personal mastery as one of the five disciplines for a learning organization. The author wanted individuals to engage in continuous learning, and the suggestions from the academic leaders demonstrate a continued focus on this area. Kline and Saunders (1998) also emphasized the importance
of individual and team learning. With regard to learning, the suggestions from the academic leaders supported this belief, as there was a strong emphasis in encouraging faculty development and student development and learning. There were also suggestions related to team learning within and across academic units.

Leaders were concerned about faculty development for full-time and part-time personnel, asking for “an increased opportunity for faculty to participate in professional development events” and “better training with support and time set aside for improvements to be integrated into the college’s skillset.” A learning culture for one would encourage faculty to adopt more student-centered teaching methods: “I think the faculty need to engage with a variety of instructional techniques for the optimum learning experience for the students. Lecture or interactive lecture sometimes becomes the ‘go-to’ for instructional method.” Another suggested that the organization should be committed to supporting faculty through conference attendance and sabbaticals.

In reviewing the literature for my study, one issue that was repeated as a concern for higher education was the rise in the use of part-time or adjunct faculty (Chait, 2002; Talburt & Boyles, 2005). One leader’s comment affirms this concern and sees this as an important area for the development of a learning organization:

We also need help training and supervising adjunct faculty, given that they make up a large proportion of our overall faculty. I personally supervise about 50 part-time faculty per semester, some in other states (they teach online). It's hard to provide good training on all the bells and whistles of our online learning system or have faculty development with that many people to help them become better
instructors, and hard to give the type of detailed feedback they need to identify areas for improvement.

Leaders were also interested in other types of training such as “providing faculty and staff training to handle new curriculum structure.”

In regard to students, the leaders were interested in improving instructional methods for students and developing a stronger institutional commitment to academic excellence. One leader commented that his/her institution should “provide more academic support for students, particularly a stronger tutoring program led by professionals.” Several leaders asked for a change in emphasis within the organization: “a commitment of resources to academic programs rather than sports,” “administration needs to care about academics in the same way they care about growing the institution,” “less emphasis on the business of education and more on the actual education,” “a greater emphasis on the importance of classroom teaching,” and “we need to focus on academics and not profit.” These statements could also speak to concern about the mission and vision of the institution. Overall, these statements from academic leaders suggest that academic leaders could build stronger learning organization principles within their organizations by focusing on creating a stronger learning environment for students and faculty and continuing to support faculty development opportunities.

**Key Finding 8: Improve Sharing of Information**

The academic leaders also suggested that communication needed to be improved to develop strong learning organization behaviors. Suggestions from the leaders related to sharing information between faculty and leadership (internal communication) and communication between leadership and stakeholders (external communication).
Involve faculty more in decision-making. With regard to communication between faculty and leadership, several leaders pointed out that leadership needed to listen to faculty and staff and involve them more in decision-making. The following suggestions of the academic leaders affirm Senge (1990a) who argued that input should be sought from all levels of the organization. This also supports Watkins’s (2005) assertion that for higher education institutions to become learning organizations they must garner faculty support.

The leaders were particularly concerned about being heard: “I'm not always certain that a great deal of listening is involved, mostly on the part of administration. Those most directly impacted by certain issues have a better understanding of the challenges, but if the institution has other ideas, those concerns aren't always addressed.” Another leader concurred, asserting that there should “stronger emphasis from the highest administration on listening to faculty members.”

Several went to the point of encouraging a bottom-up leadership and communication style. One wrote that “new ideas are shut down if they run against administrations [sic] point of view which is based on delusional thinking rather than evidence….It needs a bottom up organizations engaging faculty rather than a top own corporate structure more responsive to political pressure than good sense.” One noted that communication from leadership to faculty worked well; however, more communication from faculty up to leadership would reflect stronger learning organization principles. The leader wrote, “better communication up the chain of command – we do a good job sending communication downstream but upstream there is a lot of resistance. Yet those of us at the department chair level have the best sense of what’s happening in
the halls and classrooms.” Another argued that “being inclusive in decisionmaking [sic] would also improve the college.”

One leader wanted to improve communication between faculty and academic leaders and the institutional leadership and challenged the existing communication structure of his/her organization. This leader encouraged communication to be more open and questioned the effectiveness of the business-oriented model found at his/her organization. This individual leader expresses frustration in the top-down approach to communication within the organization.

My organization can become stronger at learning with an open exchange between administration and faculty. The adoption of a business model in higher ed. has become very popular. While, this model is popular, is leaves much to be desired. Using a business model, to run a non-profit organization may seem like the ideal approach to addressing the ever increasing financial constraints of this unique sector. A top down business model may work in some sectors but this is not one of them. In my humble opinion, a learning organization can only occur when leadership is interested in listening to the input of the people who run the organization on a day to day basis. A strong learning organization, requires leaders who are strong listeners.

**Improve communication with external stakeholders.** The leaders also stressed the importance of communication between leadership and stakeholders to increase learning organization behaviors within their organizations. Some of the suggestions from leaders include: (a) involving employers and alumni; (b) surveying other institutions to gather best practices; and (c) communicating openly with external stakeholders. One
leader wrote, “The board of trustees needs to be more independent, and stop trusting the president and taking him at his word. Every report that goes to external stakeholders has to be vetted first. If the president does not approve, the report gets rewritten by his office.” These suggestions affirm Garvin (1994) and Kline and Saunders’s (1998) beliefs that communication between customers, workers, and stakeholders is necessary for an institution to be a learning organization. They also affirm Watkins’s (2005) belief that an academic learning organization would create opportunities for teams and for individuals to build coalitions within the organization.

**Key Finding 9: The Right Leadership is Necessary for a Learning Organization**

The comments in the previous section about communication are in some ways representative of frustrations leaders experience with the structures of their organizations. For some, a need for greater communication between the disciplines reflects frustration with the current organizational structure that may impinge upon interdisciplinary cooperation or interaction. The desire for collaboration between departments and colleges demonstrate need for change in existing organizational practices and design.

From the comments in this section, the academic leaders who responded to the survey are looking for guidance from chief institutional leadership to develop their academic units into learning organizations. The respondents to this question were frustrated with the leadership within their organizations, with suggestions for adjustments in leadership style or personnel, with some feeling that the best way to move toward a learning organization was “new leadership at the highest levels,” “more effective leadership,” “stronger leadership at the VP and Presidential levels,” “new leadership at the President and VP level,” “more consistent leadership at president and provost level,”
and “new ideas and leaders whose entire experience has not been with the institution.” One suggested that the best way to improve the organization was to “fire the deadwood” and another wrote that “our former Pres. provided little leadership, which left the Chief Academic Officer in a sort of limbo were he didn’t know what he was empowered to do.” This affirms Watkins’s (2005) belief that the right leadership must be in place to achieve a learning organization, and that the presence of leadership is highly correlated to performance (Ali, 2012).

**Key Finding 10: Some Structural Changes are Needed**

For the most part, the academic leaders who responded to this study responded positively to the behavioral statements related to *structure*. The leaders generally felt that the structure of their academic colleges permitted the work necessary to become a learning organization. Still, the leaders’ suggestions on the open-ended question indicate that additional structural changes could be done to build stronger learning organization behaviors. One suggested that “an institutional effectiveness committee must be created to set goals and practices for assessment of learning and to integrate the strategic plan with student learning outcomes.” Another suggested fewer committees as academic leaders’ time is spread too thin. The more effective use of committees was a suggestion for improving the structure: “There is often a sense of forming committees to fulfill what the management wants instead of really seeking input from the faculty, staff, and students.” This adds to Senge’s (1990a) assertion that committees used in higher education can contribute to the learning organization. However, the leaders’ suggestions here indicate that committees must be purposeful and align with the goals of the organization and plans for improvement.
Comparison of Study to Previous Research

As an overall summary, Table 23 shows the connection between the findings in this study with prior research.

Table 23

*Connections with Previous Research and Literature*

<table>
<thead>
<tr>
<th>Key Findings (Mulligan, 2014)</th>
<th>Previous Research and Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Presence of learning organization principles</strong></td>
<td><strong>Disputes:</strong></td>
</tr>
<tr>
<td>• Key finding 1: Learning organization principles are somewhat present (3 of 6 learning principles exceed 4.0 mean)</td>
<td>• Higher education institutions are not learning organizations (Garvin, 1994)</td>
</tr>
<tr>
<td></td>
<td>• Higher education institutions are not structured to be learning organizations and do not possess a learning organization culture (White &amp; Weathersby, 2005)</td>
</tr>
<tr>
<td></td>
<td>• Instructors did not perceive academic organization to be a learning organization (Hunter-Johnson &amp; Closson, 2012)</td>
</tr>
<tr>
<td></td>
<td>• A learning organization was not found at the departmental level (Holyoke, Sturko, &amp; Wood, 2012)</td>
</tr>
<tr>
<td></td>
<td><strong>Affirms:</strong></td>
</tr>
<tr>
<td></td>
<td>• To be learning organizations, academic institutions should have five specific behaviors (Dill, 1999)</td>
</tr>
<tr>
<td></td>
<td><strong>Adds to:</strong></td>
</tr>
<tr>
<td></td>
<td>• UK institution reflected components of a learning organization using Senge’s (1990a, 1990b) principles</td>
</tr>
<tr>
<td></td>
<td>• Faculty rated the presence of Senge’s (1990a) learning organization principles to be moderate to high (Khasawneh, 2011)</td>
</tr>
<tr>
<td></td>
<td>• Faculty reported moderate levels of the presence of learning organization principles (Ali, 2012)</td>
</tr>
<tr>
<td></td>
<td>• Presence of learning principles differed by gender, rank and institutional type (Bak, 2012)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Learning</strong></th>
<th><strong>Affirms:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• A learning culture exists in higher education at professions focused colleges</td>
<td>• Learning is used to change behavior (Garvin, 1994; Dill, 1999)</td>
</tr>
<tr>
<td>• Best practices are shared</td>
<td>• Individuals should make use of others’ knowledge and experiences (Garvin, 1994; Dill, 1999)</td>
</tr>
<tr>
<td>• Learning is used for decision-making</td>
<td><strong>Adds to:</strong></td>
</tr>
<tr>
<td></td>
<td>• Presence of training and rewards led individuals to perceive unit as learning organization (Griego, Geroy, &amp; Wright, 2000)</td>
</tr>
</tbody>
</table>
### Table 23-Continued

<table>
<thead>
<tr>
<th><strong>Measurement</strong></th>
<th><strong>Affirms:</strong></th>
<th><strong>Disputes:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Course, program, faculty, and student data are being measured</td>
<td>- Argued for emphasis on student and faculty performance indicators (Abate, Stamatakis, and Haggett, 2003)</td>
<td>- Arts and humanities, natural sciences, and social science reported less assessment (Ewell, Paulson, &amp; Kinzie, 2011)</td>
</tr>
<tr>
<td>- Individuals are encouraged to use data for decision-making</td>
<td>- Assessment for improvement relies on multiple feedback loops and reference points over time (Ewell, 2008, 2009)</td>
<td>- Adds to:</td>
</tr>
<tr>
<td><strong>Problem-Solving</strong></td>
<td><strong>Affirms:</strong></td>
<td><strong>Disputes:</strong></td>
</tr>
<tr>
<td>- Individuals identify problems to be solved</td>
<td>- Higher education learning organizations need to manage problems (Watkins, 2005)</td>
<td>- A learning organization should have a systematic way to solve problems using data (Garvin, 1994)</td>
</tr>
<tr>
<td>- Knowledge is used for problem-solving</td>
<td>- Assessment for improvement relies on multiple feedback loops and reference points over time (Ewell, 2008, 2009)</td>
<td>- Adds to:</td>
</tr>
<tr>
<td>- Reactive decisions and quick fixes are prevalent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Data is not always used for decision-making</td>
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<tr>
<td><strong>Structure</strong></td>
<td><strong>Affirms:</strong></td>
<td><strong>Adds to:</strong></td>
</tr>
<tr>
<td>- The structure within these institutions supports learning organization behaviors</td>
<td>- Communication is necessary between academic units (Dill, 1999)</td>
<td>- Culture and structure are important considerations for change (Wong &amp; Tierney, 2001)</td>
</tr>
<tr>
<td></td>
<td>- Leaders see how parts interact (Kline &amp; Saunders, 1998; Senge, 1990b)</td>
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<tr>
<td></td>
<td>- Organizational size and culture were factors in whether a business identified as a learning organization (Birdthistle, 2008)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Vision</strong></td>
<td><strong>Affirms:</strong></td>
</tr>
<tr>
<td>- Members understand how to contribute to the vision</td>
<td>- Individuals understand how they can contribute to the team (Kline &amp; Saunders, 1998)</td>
<td>- Leaders focus on positive views of the organizational vision Senge (1990a, 1990b)</td>
</tr>
<tr>
<td>- Vision behaviors are not present within the colleges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Vision behaviors are not predictive of perceived success on performance indicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Presence of behaviors related to successful improvement</strong></td>
<td><strong>Affirms:</strong></td>
<td><strong>Disputes:</strong></td>
</tr>
<tr>
<td>- Key Finding 3: Improvement behaviors not widely present (knowledge gained from only 2 of the 6 learning organization principles is used towards improvement)</td>
<td>- Link found between learning and teaching improvement (Collie &amp; Taylor, 2004)</td>
<td>- Assessment was intended to drive course improvement (Peterson, Wittstrom, &amp; Smith, 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Institutions should focus on student and faculty assessment and these should be linked to improvement (Astin &amp; Antonio, 2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Department made changes to improve student learning after student assessment (Klemic &amp; Lovero, 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Assessment should discover flaws and be used for improvement (Castiglia &amp; Turi, 2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Scott and Dixon (2009) had also found in their study that data was not being used as effectively to improve the institution.</td>
</tr>
</tbody>
</table>
### Table 23-Continued

<table>
<thead>
<tr>
<th>Presence of behaviors related to perceived success on performance indicators</th>
<th>Affirms:</th>
</tr>
</thead>
</table>
| **Key Finding 4:** Leaders perceive themselves successful on performance indicators (Leaders reported perceived success on 7 of the 10 indicators) | - Assessment should focus on curriculum development, student learning outcomes, program assessment (Abate, Stamatakis, & Haggett, 2003)  
- Multiple assessment tools are used (Ewell, 2008; 2009)  
- Curriculum assessment occurs (Peterson, Wittstrom, & Smith, 2011)  
- Institutions should have faculty and student assessments (Astin & Antonio, 2012)  
- Student assessments are used (Klemic & Lovero, 2011)  
- “There is considerable assessment activity at the program level” (Ewell, Paulson, & Kinzie, 2011) |

### Connections between the principles, improvement, and success

<table>
<thead>
<tr>
<th><strong>Key Finding 5:</strong> Five learning organization principles are predictors of improvement (Learning, problem-solving, measurement, structure, and vision are predictors of perceived improvement)</th>
<th>Affirms:</th>
</tr>
</thead>
</table>
| **Key Finding 6:** Two learning organizations principles are predictors of success (Learning and structure are predictors of perceived success on performance indicators) | - There was a positive correlation between learning organization behaviors and financial performance (Ellinger, Ellinger, Yang, & Howton, 2002)  
- Found significant correlations between learning organization principles and academic performance (Ali, 2012)  
**Adds to:**  
- Learning organization principles explained variance in teaching and research performance (Ali, 2012)  
- Presence of learning organization principles was predictor of research satisfaction (Ali, 2012)  
- Presence of high organizational learning is predictor of success in financial and knowledge (Kumar, 2005)  
- Leadership, embedded systems, and team learning were predictors of knowledge performance (Kumar & Idris, 2006)  
- Presence of vision, knowledge management, learning culture, and leadership led to teaching improvement (Collie & Taylor, 2004) |

### Suggestions from academic leaders on building a learning organization

<table>
<thead>
<tr>
<th><strong>Key Finding 7:</strong> More emphasis on learning is needed (31 comments related to learning)</th>
<th>Affirms:</th>
</tr>
</thead>
</table>
| **Key Finding 8:** Improve sharing of information with internal and external stakeholders (23 comments related to communication) | - Emphasis on personal mastery and continuous learning (Kline & Saunders, 1998; Senge, 1990a; Senge, 1990b)  
- Create opportunities for teams and build coalitions (Watkins, 2005)  
- Seeking input at all levels gives employees value (Senge, 1990a)  
- Higher education needs to garner faculty support (Watkins, 2005)  
- Communication must exist between customers, workers, and stakeholders (Garvin, 1994; Kline & Saunders, 1998)  
- The right leadership needs to be in place for a learning organization (Watkins, 2005)  
- Presence of leadership highly correlated to performance (Ali, 2012)  
- Create opportunities for teams and build coalitions (Watkins, 2005)  
- Seeking input at all levels gives employees value (Senge, 1990a) |
| **Key Finding 9:** The right leadership is necessary for a learning organization (12 comments related to leadership) |---|
Table 23-Continued

- Higher education needs to garner faculty support (Watkins, 2005)
- Communication must exist between customers, workers, and stakeholders (Garvin, 1994; Kline & Saunders, 1998)
- The right leadership needs to be in place for a learning organization (Watkins, 2005)
- Presence of leadership highly correlated to performance (Ali, 2012)

Key Finding 10: Some structural changes are needed (26 comments related to structure)

<table>
<thead>
<tr>
<th>Adds to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Advisory committees used in higher education reflected Senge’s (1990a) learning organization principles</td>
</tr>
</tbody>
</table>

Implications for Academic Leaders

As expected, institutions within the Carnegie classifications of colleges with a professions focus are collecting information – data – to measure their success within their institutions. Within the principle of measurement, the leaders in this study reported a high presence of measurement behaviors. Also, within the open-ended question, leaders made frequent comments as to the collection of data within their organizations. What is less evident, however, is whether the data is being used to drive change and make improvements within their colleges. One leader noted, “as changes are made to the strategic plan, a data-based explanation would be reassuring to faculty that administration are practicing what they preach and using the data to drive the changes.” Academic leaders should continue to look for ways to make data relevant and useful to their decision-making processes and involve faculty in collecting and using data. Individuals at all levels of the organization also need training on assessing and using data. Organizations should also ensure that academic leaders and chief institutional leaders understand how data should be collected, disseminated, and used.

Learning at all areas of the organization continues to be a focus of the academic leaders who responded to my study. As discussed in the literature review, leaders of
academic departments, such as deans and department chairs, are in the position to take the greatest responsibility for program assessment, curricular decisions, faculty development and performance, and student learning outcomes (Ewell, Paulson, & Kinzie, 2011; Tucker & Bryan, 1991). As Lucas (2000) stated, department chairs and leaders have the responsibility to act as change agents for their organizations. It is clear from the responses and the comments in this study that academic leaders have identified the areas necessary to improve their organizations and work toward greater learning organization principles. Once the problems are identified, the academic leaders have the responsibility to continue to work within their organizations to bring about the necessary change in these areas. Through these changes, the academic leaders will be working toward developing their academic units into learning organizations.

*Communication* within organizations continues to be a struggle; this is also reflected in the *structure* of the organizations. From the open-ended responses, the academic leaders who responded to this question were frustrated by the poor communication from and to leadership and for opportunities to participate in decision making. Academic leaders can play a role in improving *communication* between faculty and administration by offering opportunities for faculty to share feedback. In addition, changes to the organizational structure, such as creation of committees or other groups, will serve as a mechanism by which academic leaders and faculty can provide input to and improve communication from upper leadership.

As reflected in the multiple regression analysis, energies placed in improving *learning, measurement, problem-solving, structure,* and *vision* will help the academic leaders to continue to move toward use of information for *improvement* within their
organizations. Academic leaders also can work to improve the perceived success on performance indicators by shifting attention to the improving the structure of their organizations and focusing on student and faculty learning. Given the discussion within the literature and from the voices of the academic leaders, these changes will take considerable time and efforts, but they are possible.

**Suggestions for Additional Research**

In reviewing the literature for this study, a clear distinction is made between the various levels of organizational structure in higher education. Previous studies have focused more heavily on institutional leadership, chief academic officers, and college and departmental leaders, such as department heads and deans. Additional research should focus on faculty only and their use of data, either gathered themselves or provided to them by leadership, to make improvements at the classroom and curricular level.

A large number of respondents to my study were from private, non-profit institutions with a religious emphasis. In reviewing the webpages for these organizations to collect names and email addresses for this study, I found the emphasis on the religious aspect to vary. Additional research on these institutions and whether learning organization theory is in greater use here would add to the literature about how academic leaders in higher education institutions are collecting and using information to improve their organizations.

My study develops a baseline understanding of the presence of specific learning organization principles in general education disciplines in institutions with an emphasis on professions-focused programs. The open-ended responses indicate the leaders’ desires to share the complexities of the link between assessment and use of data for
improvement. More in-depth interviews of individuals or case studies of institutions would add greater texture to the conversation for this specific sub-population within higher education.

**Limitations and Delimitations**

The intent of my study was to examine a specific sub-set of higher educational institutions. In doing so, I purposefully delimited the study’s usefulness, in some ways, to any group of leaders outside of this group of academic leaders. This, coupled with my choice to survey all members of the population rather than to conduct a random sample, leads to a lack of generalizability of the information to all institutions with a professions focus.

While the response rate for the study was in the expected range, the large number of individuals who did not respond to the study indicates that there are voices that were not heard. These individuals may have perceived the presence and use of the principles in a vastly different way from those who did respond to the study. In fact, concerns about reporting the absence of learning organization behaviors may have made individuals reluctant to answer the questionnaire. There is also no way of knowing how many individuals did not receive the email request to complete the survey because of their institution’s spam email policies. Although great care was taken to ensure the questionnaire worked across various platforms and web browsers, technical problems may have been an issue, either because of institutional settings or lack of experience or knowledge in completing web-based surveys.

Another limitation may be the use of the title of the survey questionnaire, “Academic Learning Organization Survey.” In assigning this name, I may have
influenced individuals who were familiar with this term to respond to the questionnaire. Conversely, individuals who were not familiar with the term, or who were opponents of learning organization theory, may have chosen not to respond to the questionnaire. Learning organization theory is associated with business-related management and leadership practices, and some individuals in higher education may be opposed to the use of these practices in nonprofit educational settings.

**Concluding Thoughts**

Despite Garvin’s (1994) assertion that higher education could not become a learning organization, the professions-focused institutions within higher education involved in my study have come a long way toward making use of the principles of a learning organization to drive improvement and success within their organizations. These academic leaders are reporting a learning culture, strong measurement and assessment practices, and efforts to break down the rigid hierarchical structures of typical higher education institutions. Through these efforts, they are also making strides toward using information gained through the use of the learning organization principles to bring about improvement and increase success within their organizations, although there are still challenges.

The results of my study suggest that, for at least some professions-focused institutions, the assessment movement has led to changes in their behaviors and practices to move beyond simply collecting and reporting data to moving closer to creating an organization in which data, information, and learning are used to drive real change within their institutions. Perhaps this study also suggests that higher education institutions will see collecting, sharing, reporting, and using information and data as regular practices to maintain their competitive advantage, and it will become as an essential part of their daily
work as teaching, public service, and research have become.
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Appendix A

Exploration of Extant Literature on Learning Organizations
Principles of a Learning Organization Identified by Specific Behaviors

<table>
<thead>
<tr>
<th>Mental models (Senge, 1990a)</th>
<th>Personal mastery (Senge, 1990a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Understand current reality (Senge, 1990b); bring mental models to the surface (Senge, 1990b)</td>
<td>- Spiritual growth</td>
</tr>
<tr>
<td>- View reality at three levels: systemic structure (generative), patterns of behavior (responsive) – trend data is an example; events (reactive) (Senge, 1990b)</td>
<td>- Competence and skill</td>
</tr>
<tr>
<td>- Test generalizations and assumptions (Senge, 1990b)</td>
<td>- Understanding what is important for the self</td>
</tr>
<tr>
<td>- Leaders must explain reasons, use data, ask for challenges and reinterpretations, understand others’ views, look for new information to challenge assumptions (Senge, 1990b)</td>
<td>- Engaging in continuous learning</td>
</tr>
<tr>
<td>- Look for gaps between espoused views and theories in use (Senge, 1990b)</td>
<td>- “the essence of personal mastery is learning how to generate and sustain creative tension in our lives”(p. 142) – creative tension as tension between what we want and what we have</td>
</tr>
<tr>
<td>- Recognize and eliminate defensive behaviors (Senge, 1990b)</td>
<td>- See themselves as part of a creative unit</td>
</tr>
<tr>
<td></td>
<td>- Use the current reality to drive personal change</td>
</tr>
<tr>
<td></td>
<td>- Accept delayed gratification</td>
</tr>
<tr>
<td></td>
<td>- Develop a certain mental maturity</td>
</tr>
<tr>
<td></td>
<td>Understand development of the self is lifelong</td>
</tr>
<tr>
<td>Systems thinking (Senge, 1990a)</td>
<td>Team learning (Senge, 1990a)</td>
</tr>
<tr>
<td>- Leader can see how parts interact (Senge, 1990b)</td>
<td>- Use learning leaders from within the organization for training (Kline &amp; Saunders, 1998)</td>
</tr>
<tr>
<td>- Blame is not assigned (Senge, 1990b)</td>
<td>- People become resources for each other (Kline &amp; Saunders, 1998)</td>
</tr>
<tr>
<td>- Understand how variables interact over time (Senge, 1990b)</td>
<td></td>
</tr>
<tr>
<td>- Identification of problems to be solved the produce the highest impact of long-term results (Senge, 1990b)</td>
<td></td>
</tr>
<tr>
<td>- Avoid quick fixes and reactionary decisions; focus on fixing the system not the symptoms (Senge, 1990b)</td>
<td></td>
</tr>
<tr>
<td>Shared vision (Senge, 1990a)</td>
<td>Adaptability (Senge, 1990b)</td>
</tr>
<tr>
<td>- Bring current views to surface (Senge, 1990, 1990b)</td>
<td>- Ability to cope (Senge, 1990b)</td>
</tr>
<tr>
<td>- “Creative tension” (Senge 1990, 1990b) – difference between current reality and vision for the</td>
<td></td>
</tr>
</tbody>
</table>
Future
- Personal visions are encouraged (Senge, 1990b)
- Individuals communicate and ask for support (Senge, 1990b)
- Vision is ongoing (Senge, 1990b)
- Both intrinsic and extrinsic visions exist (what we can do for the customer and what we do for the self, org)
- Focus on positive rather than negative visions (encourage aspiration rather than fear) (Senge, 1990b)

**Generative learning** (Senge, 1990b)
- Ability to create (Senge, 1990b); a new way of viewing the situation (Senge, 1990b)

**Leadership** (Senge, 1990b)
- Govern ideas; designed to permit change and growth (Senge, 1990b)
- Policies, strategies and structures (strategic thinking) (Senge, 1990b)
- Processes exist for change to happen (Senge, 1990b)
- Committed to larger organization mission (Senge, 1990b)
- Considers his/her impact on those supervised (Senge, 1990b)

**Systematic problem solving** (Garvin, 1994)
- Use of scientific method or Plan-Do-Check-Act cycle
- Use of data, not assumptions (“fact-based management”)
- Organize and present data; use statistical tools (ex. Pareto chart, correlations)
- Look for underlying causes
- Training in quality; policies around quality (Dill, 1999)

**Experimentation; use of new approaches** (Garvin, 1994)
- “Systematic searching for and testing of new knowledge” (p. 22)
- Encourage innovation without punishment for failure
- Move from surface understanding to deep knowledge
- Knowing how and why
- Exploration of curricula changes (Dill, 1999)

**Learning from others; best practices** (Garvin, 1994)
- Use of others’ experience as benchmarks
- Studying the way others do their work
- This can include site visits,

**Transferring knowledge** (Garvin, 1994)
- Written or oral reports; visuals
- Site visits
- Training programs
- Tours
- Presentations
- Video reports
<table>
<thead>
<tr>
<th>Learning from own experiences (Garvin, 1994)</th>
<th>Understand the current reality (Kline &amp; Saunders, 1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Review and assess successes and failures</td>
<td>- Assess the current reality in terms of culture, fear, accountability, responsibility and effectiveness (Kline &amp; Saunders, 1998)</td>
</tr>
<tr>
<td>- Make information available to team members in an accessible way</td>
<td>- Understand what needs to be changed (Kline &amp; Saunders, 1998)</td>
</tr>
<tr>
<td>- Use past information to inform decision-making</td>
<td></td>
</tr>
<tr>
<td>- Reflection</td>
<td></td>
</tr>
<tr>
<td>- Self-analysis</td>
<td></td>
</tr>
<tr>
<td>- Teaching or program evaluations (Dill, 1999)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Look for areas of improvement in mistakes (Kline &amp; Saunders, 1998)</th>
<th>Make the organization safe for thinking (Kline &amp; Saunders, 1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reframe situations to focus on positive outcome</td>
<td>- Encourage people to share ideas</td>
</tr>
<tr>
<td></td>
<td>- Create a safe place for people to express themselves</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reward risk taking (Kline &amp; Saunders, 1998)</th>
<th>Help people become resources for each other (Kline &amp; Saunders, 1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Take risks toward a long-term vision; risk should be moderate risk</td>
<td>- Use people’s strengths</td>
</tr>
<tr>
<td>- “readiness to risk” (p. 187)</td>
<td>- Recognize the value and talents of others; capitalize on uniqueness</td>
</tr>
<tr>
<td></td>
<td>- “capacity for seeing each other as resources” (p. 187)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support individual learning – (Kline &amp; Saunders, 1998)</th>
<th>Map out the vision (Kline &amp; Saunders, 1998)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Encourage learning among all employees (Kline &amp; Saunders, 1998)</td>
<td>- you cannot force a group to consensus</td>
</tr>
<tr>
<td>- Support flexible, individualized training and development (Kline &amp; Saunders, 1998)</td>
<td>- seek out “synergy” (p. 187) to build a shared vision</td>
</tr>
<tr>
<td>- “Activate your own capacity to learn” (Kline &amp; Saunders, 1998)</td>
<td>- vision must belong to everyone</td>
</tr>
<tr>
<td></td>
<td>- everyone needs to know value they contribute to the team</td>
</tr>
<tr>
<td></td>
<td>- everyone should have pride in what</td>
</tr>
</tbody>
</table>
- Align training with application (Kline & Saunders, 1998)
- Training should be evaluated and follow a continuous improvement process (Kline & Saunders, 1998)

- "from pride comes a commitment to quality"
- Understand organizational history
- "process of finding the unifying action or mission" (p. 191)

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**Bring the vision to life (Kline & Saunders, 1998)**
- Use kinesthetic modeling to show how parts are related

**Connect the systems (Kline & Saunders, 1998)**
- Use systems theory to “see how the interacting elements in a complex situation work together” (p. 231)
- Cites Deming and Senge
- A change in one part changes the whole
- 6 “guideposts” – organizational history and memory; defined purposes; rules for the system; continuous improvement; feedback; human dynamics and action

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**Take action (Kline & Saunders, 1998)**
- “get the show on the road”
- use drama as a metaphor within the organization
- interaction between the people who do the work and the customers they serve
- analogy of building a company and conducting/preparing for a play
- a learning organization needs individuals who understand their defined role

**Measuring learning**
- Evaluation of experiments (Garvin, 1994)
- Analysis of results (Garvin, 1994)
- “half-life curves” (Garvin, 1994)
- Surveys, questionnaires, interviews (Garvin, 1994)
- Direct observation (Garvin, 1994)
- Site visits (1994)
- Performance measures of some kind (Garvin, 1994)
- Assessment (Dill, 1999)
- “knowledge-based improvement” (Dill, 1999)
- “Student related performance indicators” (Dill, 1999) (i.e. course demand, graduation rates, time to completion, placement, student satisfaction)
- Student evaluations of teaching (Dill, 1999)
- “performance indicators” (Dill, 1999)
- Program review (Dill, 1999)
- Individual faculty performance contracts (Dill, 1999)
- Peer observations (Dill, 1999)
- Exam reviews – procedural issues (Dill, 1999)
<table>
<thead>
<tr>
<th><strong>Culture of evidence (Dill, 1999)</strong></th>
<th><strong>Coordination of teaching units (Dill, 1999)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“language of academic performance”</td>
<td>Successful problem solving</td>
</tr>
<tr>
<td>Used for problem solving</td>
<td>Units are designed to improve communication; organizational structure</td>
</tr>
<tr>
<td>“evidence-based approach”</td>
<td>Ex. Curriculum coordinators, faculty committees, formation of “schools” (see also “Structure”)</td>
</tr>
<tr>
<td>“new knowledge for the improvement of core processes” (p. 149)</td>
<td></td>
</tr>
<tr>
<td>Academic units can “define and defend the measures of student learning upon which they are basing their teaching processes” (p. 149)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Learning from others (Dill, 1999)</strong></th>
<th><strong>University-wide coordination of learning (Dill, 1999)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematically applied to making change</td>
<td>Faculty committees</td>
</tr>
<tr>
<td>Ex. External reviewers, external curriculum committees</td>
<td>Teaching and learning centers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Transferring knowledge (Dill, 1999)</strong></th>
<th><strong>Structure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“the traditional decentralized structure of the university exacerbates the problem” (p. 150)</td>
<td>“structure of the university” must be such that faculty can work across discipline units (Dill, 1999)</td>
</tr>
<tr>
<td>Identifying best practices</td>
<td>Structure permits organizational improvements (Dill, 1999)</td>
</tr>
<tr>
<td>Centralized teaching and learning (learning centers?)</td>
<td>“structural adaptations designed to increase curricula coordination” (Dill, 1999)</td>
</tr>
<tr>
<td>“intra-organizational knowledge transfer within universities is much needed” (p. 151)</td>
<td>Quality or standards committees (Dill, 1999)</td>
</tr>
</tbody>
</table>
Appendix B

Data Collection Instrument
Please read this consent information before you begin the survey.

You are invited to participate in a research project entitled “Perceptions of Deans and Department Chairs in General Education of their Colleges as Learning Organizations” designed to understand whether leaders perceive learning organization principles to be present within their academic colleges and if what leaders feel these principles lead to improvement and adequate with measures of success.

The study is being conducted by Dr. Louann Bierlein Palmer and M. Charnayne Mulligan from Western Michigan University, Department of Educational Leadership, Research, and Technology. This research is being conducted as part of the dissertation requirements for M. Charnayne Mulligan.

This questionnaire is comprised of questions asking about your experiences within your academic college and department and will take approximately 10 minutes to complete.

There is no cost or benefit for your participation. Your replies will be completely anonymous. When you begin the survey, you are consenting to participate in the study. If you do not agree to participate in this research project simply exit now. If, after beginning the survey, you decide that you do not wish to continue, you may stop at any time. You may choose to not answer any question for any reason. If you have any questions prior to or during the study, you may contact Dr. Louann Bierlein Palmer at (269) 387-3656, M. Charnayne Mulligan at (516) 554-5292, the Human Studies Institutional Review Board at (269) 387-6293, or the Vice President for Research at Western Michigan University at (269) 387-6298.

This study was approved by the Western Michigan University Human Subjects Institutional review Board (HSIRB) on date. Please do not participate in this study after one year after approval. Participating in this survey online indicates your consent for use of the answers you supply. All surveys must be completed before date to be included in this study.

1. Do you consent to participate in this survey?

- Yes
- No
### Academic Learning Organization Survey

2. In reference to **learning**, to what extent do the following occur within your college:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Individuals are encouraged to engage in continuous learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Individuals are encouraged to share ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Individuals serve as resources for each other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Learning is consistently applied to decision-making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Individuals are encouraged to study how others work and make use of their experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Best practices within the college are shared</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(g) Learning is consistently applied to change initiatives within the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Information gained through the above learning behaviors is used for improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. In reference to **communication**, to what extent do the following occur within your college:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Individuals ask one another for support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Data is consistently shared with members of the college</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(c) Knowledge is shared through written reports with members of the college</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(d) Knowledge is shared through oral reports with members of the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(e) Communication exists between external stakeholders and members of the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Individuals understand how they can communicate with others within the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Information gained through communication is used for improvement of performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Academic Learning Organization Survey

#### 4. In reference to measurement, to what extent do the following occur within your college:

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>Always (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Data is accessible to members of the college for use in decision-making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Individuals are encouraged to use data for decision-making</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Individuals are encouraged to test existing knowledge</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>(d) The college conducts program evaluations</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(e) The college conducts course evaluations</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(f) Student-related performance indicators are used for decision-making</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Faculty-related performance indicators are used for decision-making</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(h) There are practices in place to measure success within the college</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(i) Information gained from data is used to guide improvement of performance</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 5. In reference to problem-solving, to what extent do the following occur within your college:

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>Always (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Individuals identify problems to be solved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Quick-fix and reactionary decisions are avoided</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>(c) Processes are in place for change to occur within the college</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(d) Data, not assumptions, are used for solving problems within the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Knowledge is used for problem-solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Information gained through problem-solving is used for improvement of performance</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
### Academic Learning Organization Survey

#### 6. With regard to structure, to what extent do the following occur in your college:

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>Always (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) In your role within the college, you can see how the parts of the college interact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Others understand how parts within the college interact</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(c) The structure permits communication between academic disciplines</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(d) Faculty work across discipline units</td>
<td></td>
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</tr>
<tr>
<td>(e) Committees address quality, assessment, and standards issues within the college</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(f) The organizational structure of the college permits improvement of performance</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

#### 7. With regard to vision, to what extent do the following occur within your college:

<table>
<thead>
<tr>
<th></th>
<th>Never (1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>Always (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Everyone feels an ownership of the institutional vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) The college as a whole contributes to the institutional vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Members of the college are encouraged to contribute toward the institutional vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Members of the college are encouraged to take risks towards achieving the long-term vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Members of the college are willing to see situations in a new way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Individuals within the college focus on positive, rather than negative, views of the institutional vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) The institutional vision is used to guide improvement of performance within the college</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
8. To what extent do you perceive your academic college to be successful in the following areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Not successful</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Student learning outcomes</td>
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9. What suggestions do you have as to what is necessary for your college to become a stronger learning organization?
Academic Learning Organization Survey

The following information is optional, but your responses to these questions would be helpful for data analysis and understanding the differences that might exist between different academic leaders. You may opt not to answer these questions, and your responses to the other information on the questionnaire will still be recorded.

10. What is your primary role within your college?
   - Dean
   - Associate Dean
   - Department Head
   - Division Head
   - Director

11. How many years have you been in your current role (round to nearest whole year)?

12. How many years have you been at your current institution (round to nearest whole year)?

13. To which academic department are you assigned (i.e., English, Physics, Humanities)?

14. What type is your institution?
   - (a) Private: non-profit
   - (b) Private: for-profit
   - (c) Public

15. How many students do you have enrolled at your institution (all levels)?

Thank you!

I appreciate the time you took to complete this questionnaire. Your thoughts are valuable and your participation will provide important information related to academic learning organizations.
Appendix C

Human Subjects Institutional Review Board Approval
Date: November 4, 2013

To: Louann Bierlein Palmer, Principal Investigator
    May Charmayne Mulligan, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: Approval not needed for HSIRB Project Number 13-11-03

This letter will serve as confirmation that your project titled “Perceptions of Deans and Department Chairs in General Education of Their Colleges as Learning Organizations” has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because you are analyzing an organization and not collecting personal identifiable (private) information about individuals.

Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.
Appendix D

Verbatim Responses to Q9: Suggestions from Academic Leaders
Verbatim Responses to Question 9

Question 9: What suggestions do you have as to what is necessary for your college to become a stronger learning organization?

1. More rigorous courses and assessment techniques.

2. -intentional focus on academic excellence -recruitment of students from top 10% of their high school classes -develop campus culture with liberal arts at the center, better synergy with pre-prof programs -avoid the online bandwagon, attractive as it may seem for short term success and sustainability

3. Fewer teaching hours to leave more time for research. Fewer meetings to allow more time for course development.

4. Our revised assessment plan and programmatic evaluation plan will need to be fully operational in order for us to see the real improvements that we are looking for.

5. I'm not always certain that a great deal of listening is involved, mostly on the part of administration. Those most directly impacted by certain issues have a better understanding of the challenges, but if the institution has other ideas, those concerns aren't always addressed.

6. The replacement of the central administration and the dean. Appointments are based on cronyism, creativity and new ideas are shut down if they run against the administrations point of view which is based on delusional thinking rather than evidence. The University desperately needs new ideas and leaders whose entire experience has not been with this institution for the last twenty five years or their entire career. It needs a bottom up organizations engaging faculty rather than a top down corporate structure more responsive to political pressure than good sense.

7. 1) Less nepotism in hiring practices. 2) Higher standards for hiring faculty. 3) Higher standards in place for students. 4) A strong and evident commitment to the mission and vision of the university. 5). A revisioning of "retention strategies" 6.) Increased graduation rates 7) Standards that represent peer institutions 8) Holistic evaluation of faculty teaching performance 9) Collaboration across disciplines 10) Appropriate appointments at the administrative levels, i.e. Deans who understand "interdisciplinary trends" 11) Expectation of scholarship from faculty 12) A working knowledge that scholarship and research informs effective pedagogy. 13) Less of a "quick-fix" mentality in so many areas I could not possible delineate adequately.

8. A commitment of resources to academic programs rather than sports.

9. More faculty involvement. As of now administration and athletics runs it... the rest of us just work here!
10. The administration needs to share more information to allow us to buy into the vision for the college. Being inclusive in decisionmaking would also improve the college.

11. Serving as a department head at my university is meaningless - it is all bureaucratic busywork, with administrators making most of the decisions with little/no consultation with faculty. I am head of a History Department of two/2 full time faculty members - a failed search for a third member 7-8 years ago has never been re-launched... the traditional liberal arts are on the decline in favor of STEM and Business - a new major in "Insurance Risk Management".

12. Replace top-down administrators who are fundamentally opposed to faculty governance, were promoted to administrative positions without having been exemplary scholars, and view their administrative position as a sinecure..

13. Utilize more student-based resources and ideas.

14. My organization can become stronger at learning with an open exchange between administration and faculty. The adoption of a business model in higher ed. has become very popular. While, this model is popular, is leaves much to be desired. Using a business model, to run a non-profit organization may seem like the ideal approach to addressing the ever increasing financial constraints of this unique sector. A top down business model may work in some sectors but this is not one of them. In my humble opinion, a learning organization can only occur when leadership is interested in listening to the input of the people who run the organization on a day to day basis. A strong learning organization, requires leaders who are strong listeners.

15. More commitment to student learning assessment; better communication between administration, staff and faculty; more respect between faculty and staff and administration.

16. Develop a long range plan and strategy to meet the goals of the plan.

17. Consistent packaging and dissemination of data that impacts decision making. Availability of information alone isn't adequate. Time must be spent sharing data regularly from the institutional level. This is happening more but needs to become even more a regular part of business. Then, as changes are made to the strategic plan, a data-based explanation would be reassuring to faculty that administration are practising what they preach and using the data to drive the changes.

18. Administration could trust input of faculty more

19. More purposeful communication between schools that are outside the College of Liberal Arts & Sciences. More clarity on policy and processes. I am no longer the chair - but am now the Dean of CLAS - so my responses relate to that entity - not the university as a whole.
20. We need to focus on academics and not profit.

21. Communication, communication, communication! Data needed to make decisions is effectively embargoed by self-serving interests (e.g., Tech Services).

22. Clear institutional identity which guides institutional goals and objectives. This would allow for all disciplines to know how to tie into the institutional mission in deeper and more creative ways.

23. We are a small private liberal arts and not-for-profit institution that is growing nationwide through our online programs, but we still need to attract more students in our adult campuses in Arizona, Wisconsin, and Indiana. Our traditional home campus in Ottawa, Kansas also needs to increase its student population. We are primarily tuition based for our funding and increasing our student population is necessary to strengthen our serves t|for them.

24. continuing and increasing communication and collaboration; integration of humanistic measures alongside quantitative measure

25. We need to accept students who have stronger reading, writing, and mathematics skills. We need to continue to strive for academic excellence.

26. Less emphasis on the business of education and more on the actual education. While they are very successful in keeping the classrooms filled and developing the trendy majors, it feels like we are the Walmart of the business of education. I guess it depends on how one interprets the mission of the university.

27. Data about learning needs to be distributed and discussed more widely. Learning outcomes must be better mapped through each program's courses. An institutional effectiveness committee must be created to set goals and practices for assessment of learning and to integrate the strategic plan with student learning outcomes.

28. Reduce course loads and/or committee work. We are spread tooooooo thin. Available funds is a hindrance to professional development.

29. Systems thinking (there's something you can use!). We need more consistent closed-loop assessment at all levels.

30. Fire the deadwood

31. To continue to improve on the areas that are identified as needing improvement in our university academic assessment program.

32. Consistent valuing of teaching (as opposed to research) by the administration. Fewer external demands on faculty time that detract from teaching and research efforts.
33. We and our Dean need to be acknowledged as significant contributors to the institution at large.

34. Better training with support and time set aside for improvements to be integrated into the college's skillset.

35. We are just beginning to really understand and employ assessment strategies. We are at the step of revising our outcomes and fully integrating them into our curriculum; we cannot rest.

36. The current visioning process which is a highly top-down and at some points dictatorial needs to change. Some of it is staffing, other contributing factors are structural. It has generated considerable consternation and fear and has not had any mechanism to address those very normal emotions. We are simply told that we will die unless we do this.

37. More endowments. It is hard to achieve these assessments without money. We are tuition-driven.

38. Recently our new President has implemented University wide strategic goals and vision. Workshops lead by an outside company are helping us with the transition to a more effective, collaborative organization. Hopefully in a few years, my responses to the questions in the survey will be more positive.

39. We need to have administrators willing to remove personnel from the faculty who are not successful teachers/colleague

40. Continue to focus on assessment data and other evidence to drive decisions. More commitment to full time faculty and program leaders.

41. Hire new faculty, and promote probationary faculty, who understand and support the mission and identity of the university

42. Communication among faculty, faculty and administration, and surveys of best practices among other institutions are necessary for success.

43. Our academic dean needs to be a little more forceful in enforcing policies with the faculty in our college. His vision of being hands off is good for promoting a sense of "free reign", but this has lead to problems with faculty ignoring policy.

44. De-centralize the registrar's office

45. We need better communication between administration and the faculty. The Arts & Sciences College has good communication because we have a Dean who makes communication a priority, but communication from points above him in the hierarchy is poor to nonexistent.
46. I think the faculty need to engage with a variety of instructional techniques for the optimum learning experience for the students. Lecture or interactive lecture sometimes becomes the "go-to" for instructional method.

47. An increased opportunity for faculty to participate in professional development events, a more selective student enrollment process, and a greater emphasis on the importance of classroom teaching.

48. Administrators that care more about the health of the institution than about punishing faculty they don't like and rewarding faculty they do like.

49. Better routines/processes for assessment at all levels, especially general education core as opposed to majors.

50. Provide more academic support for students, particularly a stronger tutoring program led by professionals.

51. To pay more attention to the systems that have been set up. To get rid of those who are only in their own silos. To be more transparent about available resources for improvement.

52. Colleges will continue to decline as places of stronger learning as long as the emphasis on student evaluations as a quick, easy assessment of faculty effectiveness exists.

53. More collaboration between colleges at the university.

54. New leadership at the highest levels.

55. We serve a significant number of first-generation, often academically under-prepared students. We have the assessment mechanisms in place; we make data-driven decisions, the faculty and administration are really involved in looking into best practices in teaching and serving students, etc. But we don’t always have the resources to follow through on the things we all know need to be done. We do a lot with the resources we have available, but when your budget is reduced by 40% while your student body increases, and the proportion of the student body that is under-prepared grows, it’s hard to keep standards up and provide the additional help that the lower-performing students need to improve and ultimately graduate with a clear skill set. So we need more resources overall, and resources specifically for things like more academic advisors (and ones with more training), more professionalized tutoring (especially for writing, given the number of students we have with a range of writing/language issues, etc.). We also need help training and supervising adjunct faculty, given that they make up a large proportion of our overall faculty. I personally supervise about 50 part-time faculty per semester, some in other states (they teach online). It’s hard to provide good training on all the bells and whistles of our online learning system or have faculty development with that many
people to help them become better instructors, and hard to give the type of detailed feedback they need to identify areas for improvement. In general, our adjunct faculty also have a less rigorous grade distribution, more use of extra credit, etc., and it's hard to find time to talk to everyone about these issues and help them figure out how to address them, while also retaining their academic freedom over their courses. I wish I could get adjunct faculty more integrated with the full-time faculty. And I really wish we could pay them more; it's hard to justify pushing someone to give better feedback to students on essays, or develop better lectures, etc., when they're making less than $3,000 per course, with no benefits.

56. The university needs to look at the exit door rather than the entrance door. If the university wants a certain type of graduate, they need to recruit and accept a certain type of incoming student. We accept too many students who are doomed to fail in the degree they want to pursue.

57. Better communication up the chain of command--we do a good job sending communication downstream but upstream there is a lot of resistance. Yet those of us at the department chair level have the best sense of what's happening in the halls and classrooms.

58. More effective leadership.

59. New leadership at the President and VP level

60. The only thing we lack is time. There is a serious commitment to it, but day-to-day work often impedes loftier goals. A 4:4 teaching load is too heavy today.

61. The president needs to stop running the college as his own personal fiefdom, and he needs to involve faculty in the decision-making process rather than treating them a dispensable and disposable assets. The board of trustees needs to be more independent, and stop trusting the president and taking him at his word. Every report that goes to external stakeholders has to be vetted first. If the president does not approve, then the report gets rewritten by his office and the person is told to present the new report as is or risk losing his or her job.

62. To align student recruitment with the realities of campus life.

63. Administration needs to care about academics in the same way they care about growing the institution.

64. We need data from which to make data-driven decisions; at this point, we collect data but have major problems accessing it and using it. We also need stable and stronger leadership at the VP and Presidential levels: Our former Pres. provided little leadership, which left the Chief Academic Officer in a sort of limbo where he didn't know what he was empowered to do. Right now, we have an Interim Pres., so the situation isn't much better. We Deans are often left on our own to make decisions, without having data and
without knowing whether those up the chain of command will support us. It's a fairly tough time we're going through.

65. This university takes inordinate pride and acquires its identity by taking much time/effort in measuring and accumulating data. Less time/effort should be spent collecting data, and more time/resources should be spent on things that encourage human interaction.

66. Encourage equal respect and support for adjuncts and full time faculty.

67. Organizational leaders should adopt a model of change/improvement that starts with the stake-holders rather than the top-down model that is currently used. There is often a sense of forming committees to fulfill what the management wants instead of really seeking input from the faculty, staff, and students.

68. Less personality driven leadership More consistent leadership at president and provost level change in org. structure to achieve learning goals

69. 1. Move away from its military mindset 2. Truly value and praise the expertise of its faculty 3. Support faculty development through well-supported sabbaticals 4. Support faculty development (conference attendance) 5. Adopt standard academic values and policies

70. Continue to involve faculty in new course creation and implementation.

71. 1) Involving employers and alumni in our curriculum development 2) Implementing assessment methods of students’ learning (not of teaching); example SALG/student assessment of learning gains 3) Improving advising model 4) Changing the curriculum from being content-based to experiential-based, with an emphasis in competencies (not so much towards learning facts without any context). 5) Providing faculty and staff training to handle new curriculum structure

72. We need more time to think about what the outcomes are and the best way to assess them. If colleagues are not coming from a purely educational background (teaching certification or degree in education, for example) I find that they struggle to understand the process in some ways. Time is needed to teach them and for them to digest the concepts before changing every course or program with hopes of truly assessing student outcomes.

73. Stronger emphasis from the highest administrators on listening to the faculty members who understand their area of curriculum, and setting up situations in which faculty listen to each other. Within my school, I am creating interdisciplinary and cross disciplinary structures in order to engage faculty members to discuss differing perspectives.

74. We need to develop more programs
75. Tying ideas faster among the faculty. Quicker decision making. Less items on the "back burner" at any given time. Once the idea is accepted start visibility study immediately. Implement approved program faster.