The Role of Information in the Decision-Making Processes of Chief Academic
Officers and Chief Financial Officers at Liberal Arts Colleges

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This dissertation titled
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Abstract

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The Role of Information in the Decision-Making Processes of Chief Academic Officers
and Chief Financial Officers at Liberal Arts Colleges

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Private liberal arts colleges are struggling and the number of these institutions is declining dramatically. Significant changes are underway that threaten these institutions and the form of education they provide. The more that can be known about the challenges confronting these institutions, as well as strategies effective in addressing them successfully, the greater the prospects are for sustaining liberal arts education.

In this qualitative multi-case study, I investigated decision-making by chief academic officers and chief financial officers at four private liberal arts colleges. Findings revealed tensions dealing with mission, financial health, changes in the external environment, and other areas. Response mechanisms by the institutions to address these challenges were identified, as were characteristics of effective senior leaders. Ultimately, the morphing of liberal arts colleges into other types of institutions does not necessarily equate to the end of liberal arts education, nor the ability of these institutions to provide that education.
To those teachers and leaders who dedicate their lives and careers to supporting critical thinking, broader horizons, and the love of learning. Never has it been needed more.
Acknowledgments

It would be impossible to sufficiently recognize or thank Dr. Peter Mather for all the help, encouragement, work, and support he has provided me in this effort. Pete, please know that your purpose in life is fulfilled in so many ways, not the least of which is the difference you make through your students. You are a shepherd in the most important and noble sense of the word, as well as a guardian angel to so many of us. This dissertation would never have been possible without you. I also want to acknowledge and thank the other members of my dissertation committee, and particularly Dr. Laura Harrison. Laura, you helped me understand the importance of focusing on liberal arts colleges, and for that I am so very thankful. For Dr. Bob Young, for help when I very much needed it. I also want to acknowledge my wife and best friend, Sandra, for her love, understanding, and support. You are the love of my life, and my partner in life. To my parents, Berenice and Waldon Dodd, for their care and for all the things they taught me including the value and importance of hard work. Mom, you broadened my horizons and instilled in me a love of learning, which enabled me to have a life far beyond the one I knew as a child. To my kids, Adam and Kelley, for their love and support. And finally, to those dedicated teachers and leaders working to ensure the survival of liberal arts education at a time when our nation and our world have never needed it more.
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Chapter 1: Introduction

Background

The environment in which colleges and universities exist today is dynamic and competitive. Among the many issues confronting institutions are reduced public financial support, pressure on limited operating resources, increased competition with other schools, globalization, and heightened public scrutiny (see e.g. Dodd, 2014; Matsumori, 2013; Ferrall, 2011; Eckel & Kezar, 2006). Among a wide variety of colleges and universities that constitute American higher education, the most threatened of institutions are private liberal arts colleges. These schools are in serious trouble, and their numbers are declining (Breneman, 1994; Ferrall, 2011).

Private Liberal Arts Colleges

As significant as the challenges are for higher education generally, the situation faced by private liberal arts colleges is viewed as particularly difficult and complex. These are among the oldest of educational institutions in America (Rudolph, 1990; Brubacher & Rudy, 1997). Breneman (1994) argues that the private liberal arts college is one of American society’s “greatest success stories” (p. 1). At the same time private liberal arts colleges are among the most threatened of institutions today in terms of financial stability and prospects for survival (Breneman, 1994; Ferrall, 2011). Breneman describes small private colleges as the most vulnerable institutions. He positioned the state of liberal arts questions in the subtitle of his book as, “Thriving, Surviving, or Endangered?” Ferrall (2011) described the state of these schools in the title of his book, “Liberal Arts at the Brink.” Noted management analyst and author Peter Drucker has stated “the stand-alone liberal arts college cannot survive” (in Balda, 2010). Weissmann
(2014) quotes a Moody’s Investor Service analyst as describing the condition of many small private colleges as a “death spiral.”

Liberal arts colleges comprise a complex and interesting microcosm within the larger community of over 4,000 United States colleges and universities. Breneman (1994) states that one of the most unique attributes of liberal arts colleges is their focus on central educational missions, which he describes as “education for education’s sake” (p. 3). Ferrall (2011) reports that liberal arts colleges provide extremely costly services, and relatively speaking, the most expensive undergraduate education. He notes that these institutions, characterized by “residential campuses, small classes, full-time tenured teaching faculties, lack of graduate student teaching assistants, and expansive facilities (e.g., libraries, laboratories, athletics), provide the most expensive undergraduate education” (p. 30).

As Breneman (1994) and Ferrall (2011) both observe, these institutions have declined in number as other institutions emerged as dominant forces in higher education. Pfinster (1984) reports that in 1955 the liberal arts colleges accounted for 40% of all higher education institutions and enrolled 26% of all students. Breneman states that in 1987 the Carnegie Foundation identified only 16% of institutions as private liberal arts colleges with only 4.4% of total enrollments. Ferrall (2011) reports that today, liberal arts colleges form by far the “smallest piece of the vast higher education armada” (p. 13) and the one with the least growth. He notes that with an enrollment of 350,000 undergraduates, this sector accounts for less than 2 percent of all postsecondary students. Delbanco (2012) states that less than 1 percent of all college students still attend independent residential colleges that exist apart from a large university.
Private liberal arts institutions face particularly difficult decisions in the context of adherence to traditional mission and identity. Breneman (1994) states, “We are indeed losing many of our liberal arts colleges, not through closures but through steady change into a different type of institution” (p. 13). Ferrall observes that it is clear some liberal arts colleges are not going to survive, at least not without abandoning their liberal arts mission. He concludes that those who do survive will do so only if they are at the “top of their game.” By his standard, this means providing excellent teaching, “the one area of natural advantage they enjoy” (p. 4). While liberal arts colleges have long been characterized by passionate alumni, the plight of these institutions has recently been the subject of a heightened outpouring of support by passionate constituents and alumni who are loyal to the missions and identities of these institutions (e.g. Christ, 2012; Breneman, 1994; Ferrall, 2011; Roche, 2010).

**Decision-Making and Organizational Change in Higher Education**

As Bergquist and Pawlak (2007) observe, “additional external influences in our global culture are pressing down on the academic institution, forcing it to alter the way it goes about its business” (p. 1). The American higher education environment is characterized by its increasingly market-driven and competitive nature. Rowley, Lujan, and Dolence (2001) describe this paradigmatic change as the transition from provider-driven to consumer-driven higher education. Increased competition, in addition to numerous other factors, has resulted in institutions becoming more tuition dependent and they must compete for students whose tuition, fees, room and board now typically comprise the primary source of operating budgets. As a result, the need for operational efficiency and effectiveness is substantial as a means of controlling costs (see e.g.
Hazelkorn, 2007; Ward, 2007; Van Der Werf & Sabatier, 2009). Institutions, therefore, are confronted with a broad range of decisions affecting a wide range of factors: revenue generation, resource allocation, and academic programs. These in turn affect the financial viability of the institutions.

An interesting depiction of the competitive environment for higher education comes from *The College of 2020* from Chronicle Research Services (Van Der Werf & Sabatier, 2009):

The most elite colleges will always have their constituencies and a ready supply of students looking for a traditional college education. Many flagship state institutions also have a similar built-in advantage. For students who cannot get into elite institutions or cannot afford them, the large, nearby public university will be their ideal. But the total group that attends those types of institutions makes up far less than half of collegegoers, and it is shrinking. Community colleges and for-profit institutions should continue to thrive because of their reputations for convenience. The rest of colleges – regional public universities, small liberal arts colleges, and private universities without national followings – can expect to compete for students based on price, convenience, and the perceived strengths of the institutions. They will need to constantly ask themselves “What is college?” and be constantly rethinking the answer if they want students to attend. (p. 6)

For mission-driven liberal arts colleges, the concept of embracing change is often seen as being in direct conflict with adherence to mission and the elements that support the realization of that mission. Numerous authors (e.g. Breneman, 1994; Ferrall, 2011;
Delbanco, 2010) have described the stark choices these institutions face as they struggle to survive.

Higher education institutions are recognized as very complex organizations (Cohen et al., 1972; Bess & Dee, 2008; Eckel & Kezar, 2006; Bergquist & Pawlak, 2007). Bess and Dee report that colleges and universities represent “communities of action comprising individuals who make myriad decisions both alone and in groups” (p. 655). Yet higher education environments are widely characterized by difficult and slow decision-making (see e.g. Ward, 2007). The loosely coupled nature ascribed to institutions by many authors is also said to make management particularly difficult (see Weick, 1976). Bess and Dee (2008) provide an excellent discussion of individual and organizational decision-making in higher education, including the various models used to describe differing approaches and techniques. One of the more notable observations was the “Garbage Can Model of Organizational Choice” put forward by Cohen, March, and Olsen (1972). Within this model, the authors described the nature of colleges and universities as organized anarchies marked by problematic inclinations, simple trial-and-error procedures, and fluid participation. As the authors observe, a higher education institution “can be described better as a loose collection of ideas than as a coherent structure” (p.1).

Previous writers have frequently observed that these organized anarchies make collective, coordinated decision-making and action problematic to the extent that decisions are often made in an almost haphazard manner (see Cohen et al., 1972; Hardy, 1990; March, 1994; Hatch, 1997). Eckel and Kezar (2006) note that the organizational characteristics particular to colleges and universities can help explain a number of
institutional behaviors. For example, they draw attention to the dual sources of authority in institutions: bureaucratic / administrative and professional. And the authors make the excellent point that decision-makers often compromise because “the optimal (or best) choice” decision may ultimately be inactionable because of conflicts resulting from competing goals, values and commitments of those involved in the decision process. All of these factors contribute to the decision-making context in colleges and universities.

Also illuminating is Bergquist and Pawlak’s (2007) model describing six distinct cultures that operate within academic institutions, and to which the constituents comprising the institutions belong and interact. The authors note that it is within this complex organizational environment that decisions must be made and implemented. The six cultures described by the authors are: Collegial, Managerial, Developmental, Advocacy, Virtual, and Tangible. They note that the Collegial and Managerial cultures date back to the very origins of higher education in America. The authors report that the Collegial culture is very common in liberal arts colleges.

The external environment for institutions is also complex and highly dynamic. Eckel and Kezar (2006) have noted the impact of a rapidly changing environment on institutions, stating “Many leaders of colleges and universities find themselves wading carefully through a swamp of new decision-making challenges, and they often find themselves slipping” (p. 1). As the authors note, institutions may have established and traditional processes, but in today’s environment “the lack of information, the ambiguity of the pressing situations, the speed at which decisions are required, and the sheer number of decisions” (p. 2) may require new and different processes that compete with or contradict established ways of decision-making.
Statement of the Problem

Decision-making is ultimately a human process with many complex elements. Even rational decision-making is recognized for its limits. Bess and Dee (2008) have noted the critical nature of decisions, calling them the “core transactions” of any organization. But they also note that half of all organizational decisions ultimately fail.

To ensure long-term survival, senior leaders must successfully navigate their institutions through challenges in some manner. To a great extent, the navigation of institutions within both external and internal environments is manifest by the decisions that senior leaders make, or fail to make. The backdrop for this decision-making is complex and involves institutional mission and identity, a highly dynamic external environment, and multiple constituencies and stakeholder groups including faculty, students, and governing bodies (Cohen, March, & Olsen, 1972; Glenn, 2010; Bess & Dee, 2008; Eckel & Kezar, 2006).

Two central factors in institutional decision-making involve revenue generation and academic quality. Illustrating this are accreditation standards published by the Middle States Commission on Higher Education (MSCHE). For example, requirement 9 of the Commission’s Standards for Affiliation (2015) states: “The institution’s student learning programs and opportunities are characterized by rigor, coherence, and appropriate assessment of student achievement throughout the educational offerings” (p. 3). Simultaneously, requirement 11 states that “The institution has documented financial resources” from its various sources “that are adequate to support its educational purposes and programs and to ensure financial stability” (p. 3).
Academic and financial factors are integrally linked within institutions in ways that include finding ways to fund operating budgets as well as decision-making concerning resource allocation. As a result, decisions in these areas may well represent the most fundamental and consequential of decisions made by senior institutional leaders (Dodd, 2014). Breneman (1994) and Ferrall (2011) both provide accounts of the tensions and difficulties resulting from these competing goals within liberal arts colleges.

Successful navigation of institutions by senior leaders is widely assumed to require intentionality in decision-making, and effective decision-making suggests the use of a framework from which to develop and evaluate the options available. Effective decision-making is consistently linked to marketplace competitiveness, and therefore organizational success (Dean & Sharfman, 1996; Davenport, 2006; Sabherwal & Becerra-Fernandez, 2011). Yet to date, and as is discussed in the literature review that follows, few research studies have been performed in the area of higher education that document and explain the institutional decision-making context, the processes employed by senior leaders, and the information used to support decision-making.

Mintzberg et al. (1976) stress the need for strategic decisions, arguing that top level decisions are essential for driving institutional change in positive directions. As they state, focusing instead on simply improving operational decisions means institutions “may well cause organizations to pursue inappropriate courses of action more efficiently” (p. 246). Harrison and Pelletier (1995) report that, “Strategic decisions are seldom made by chief executives acting alone. Rather they are usually the product of the top management team – i.e. the CEO and the managers reporting directly to the chief executive” (p. 53). For colleges and universities, the senior managers typically represent
the president’s cabinet. And for those decisions involving academic matters, the convention is for the chief academic officer (CAO) to make, approve, or recommend to the president or chancellor, strategic decisions in their area of responsibility. For financial matters, the convention is for the chief financial officer (CFO) to make, approve, or recommend to the president or chancellor, strategic decisions in their area of responsibility.

The reality is that senior institutional leaders are individuals who must make, or determine not to make, numerous decisions that affect the futures of their institutions. And, this decision-making occurs in a highly challenging internal and external environment. As noted above, this is particularly the case for liberal arts institutions. Yet as Brehmer (1999) observes, “despite nearly 50 years of decision research, we do not know very much about what people actually do when making decisions” (p. 10).

This bring the decisions these institutions make more clearly into focus. As institutions respond to the challenges confronting them, how are decisions made? How is success defined? Is adherence to mission at any cost the ultimate goal, even if that means extinction? Or is survival through adaptation in order to support liberal arts education the goal? And of particular importance to this study, how do senior leaders at private liberal arts colleges make and then implement such decisions?

This is not to suggest that CAOs and CFOs alone can directly choose or personally impact all of these areas. However, these senior leaders are key players in decisions that subsequently impact their institution and their respective areas of responsibility. The decisions include such areas as competitive strategy, market positioning, revenue generation, financial planning, and resource allocation. Resources
available to support institutional operations are finite, which imposes parameters on the
decision-points available regarding resource allocation. Similarly, parameters exist
concerning opportunities for resource generation from tuition revenue. As a result,
comprehensive decision-making by senior leaders involves finding solutions to the
institution within the competitive and dynamic external environment that favor the
overall health of the institution, both academically and financially (Dodd, 2014). As
noted, the situation is even more complex at liberal arts colleges, where adherence to
mission and identity is a primary consideration against which all other decisions are
made. As Loomis and Rodriquez (2009) note, “what decision-makers should recognize is
that not all things are compatible in a world and within an institution dominated by
scarcity of resources” (p. 482). The reality is that CAOs and CFOs have opportunities to
make strategic decisions within this framework, and to employ information in making
those decisions, but it is unclear from previous research as well as my personal
experience the degree to which this is the case.

**Goal of this Study**

Numerous questions exist concerning how and why senior institutional leaders
make decisions in areas that are of central importance to the institution including those
that involve the balance between revenue generation and academic quality. Previous
studies suggest that these questions extend to the context of the decision-making process,
tensions and conflicts that arise, the roles of constituents, and the tools and resources used
to support decision-making (see e.g. Blanchette, 2010; Clarke, 2001; Heise, 2006; Cruz,
2011). The purpose of this research is to investigate and document these aspects of the
decision-making processes employed by senior institutional leaders at a specific type of
academic institution. Because liberal arts colleges represent a subset of higher education institutions most challenged by the current socioeconomic environment, this research will focus on decision-making by institutional leaders at these institutions.

**Areas for Investigation**

Decision-making is a complex process, particularly in higher education environments for the reasons discussed above. A qualitative approach will be utilized to explore decision-making by senior leaders at private liberal arts colleges. This study will employ a case study methodology, and is intended to be primarily descriptive in nature. The purpose will be investigating and documenting decision-making by senior leaders at the institutions comprising the cases in this multi-case study.

It is not the intention of this study, nor a reasonable goal, to produce a definitive guide regarding decision-making by CAOs and CFOs. As Yin (2014) notes, one aspect of case study research is that there will usually be many more variables of interest than data points. Consistent with the goal for this type of research, and leveraging one of the strengths of this approach as defined by Merriam (1998), this study will be anchored in real-life situations and the results are intended to provide a rich and holistic account of the phenomenon being investigated in a way that helps illuminate it.

The following represent the research questions to be explored in developing a holistic understanding of the decision-making process by senior leaders at private liberal arts colleges:

1. How do participants express tensions between the liberal arts mission and financial challenges these institutions face?
2. How do participants negotiate the tensions (as expressed by the participants) between the liberal arts mission and financial challenges?

3. How do participants define their constituencies and what role do they play in participants’ decision making, particularly in the context of shared governance?

4. How does a participant's identification as CFO vs. CAO inform their decision making?

5. What data and/or information are available to these decision-makers in the areas being investigated, and what bearing does it have on their decisions?

**Significance of the Study**

The environment for higher education in America has been changing dramatically, and many institutions have struggled to successfully adapt to the current environment. Liberal arts colleges are regarded as the institutions confronting the most serious issues, as well as facing the most serious challenges to their survival. This study seeks to illuminate the decision-making processes at these vulnerable institutions and to produce rich, thick descriptions of the practices employed by the CAOs, CFOs, and institutions in the study. This study is intended to contribute to the understanding of decision-making processes by these senior leaders at private liberal art institutions in general, and particularly practices that are found to be effective in helping these institutions adapt and survive. In this way, this study represents the opportunity to explore and document an issue of potential importance to other private liberal arts institutions, and indirectly to liberal arts education more generally.
Limitations of the Study

There are several notable limitations to this study. Perhaps chief among them is the assumption that information gathered from the sample population is representative of the larger group of liberal arts colleges. Adequate identification of a valid sample population and good participation by the members of the sample population will help in mediating this limitation and promoting representative results. This is a multiple case study, which also helps mitigate the limitations of the study. Merriam (1998) suggests that this approach enhances the external validity and generalizability of the findings. However, the possibility remains that the results from the sample group will vary from the population at large.

Another challenge and possible limitation is the identification and eventual participation and engagement of the senior leaders at the institutions that comprise the sample population. Individuals in similar roles at different institutions sometimes have different titles and different reporting relationships. Further, it is not assumed that even if the individuals are successfully identified and agree to participate that they will do so, and subsequently provide the information sought in this study. Adequate investigation of this issue among the sample population will help ensure that this challenge is dealt with successfully.

An overarching limitation for this and most other studies of similar nature is the extent to which the results from this study are ultimately applicable and useful to other institutions. Although this can be mediated somewhat by both adequate sampling and proper execution of the study, this limitation clearly cannot be mediated completely. It will be important to ensure that the results of this study result from sound research and
interpretive methodology as a first step in ensuring that the results have relevance for other institutions. The transferability of the results of this study is directly dependent upon ensuring rigorous standards in the qualitative methods utilized.

With the limitations noted above, it is likely that an area of such relevance to institutions today will benefit from the information gained through this research.

Definition of Terms

**Decision-making.** Decision-making is a human activity and means selecting a course of action to solve a problem or realize an opportunity.

**Decision-making process.** The way in which humans make choices by identifying a decision to be made, gathering information, and assessing alternative solutions.

**Tensions.** Tensions are real or perceived variances in an organization or its environment that cause disruption or discomfort. Tensions may suggest the need for action or resolution in order to relieve the cause or the symptoms, and return to a more comfortable state of being.

**Data and/or information.** In this study, data and/or information will refer to observations, perceptions, or interpretations of real-world situations or occurrences. Data and/or information is generally alleged to be true by the entity conveying it, and generally evaluated for truth by the person receiving it. Data and/or information can be structured or quantitative in nature, such as numbers. It can also be unstructured or qualitative, such as pictures or human discussion and facial expressions. In this study, the participants are not expected to know or understand more formal constructs or definitions differentiating data from information.
Chief academic officer. The senior leader in the area of academics at a higher education institution. The acronym for chief academic officer in this study is CAO. A CAO may have the functional title provost, vice president for academics, dean, or a variant, depending upon the institution. The CAO usually reports directly to the president of an institution, and duties may include to make, approve, or recommend to the president or chancellor, strategic decisions in their area of responsibility. Responsibilities and duties could include such things as academic programs, academic organizational units, and less direct areas such as student learning outcomes, student retention, and relationship with faculty.

Chief financial officer. The senior leader in the area of budget and finance at a higher education institution. The acronym for chief financial officer in this study is CFO. A CFO may have the functional vice president for finance, vice president for finance and administration, or a variant, depending on the institution. The CFO usually reports directly to the president of an institution, and duties may include to make, approve, or recommend to the president or chancellor, strategic decisions in their area of responsibility. Responsibilities and duties could include such things as managing the overall finances of an institutions, fulfilling external audit responsibilities, developing recommended institutional operating budgets, and keeping the president, board, and senior leaders informed as to the status of budgetary performance.

Liberal arts colleges. In this study, the definition supplied by the Association of American Colleges and Universities is used to provide a general understanding of liberal arts colleges. On their website, the organization defines these institutions as: “A particular type of institution—often small, often residential—that facilitates close
interaction between faculty and students, and whose curriculum is grounded in the liberal-arts disciplines” (AACU website, 2017). More detailed information from other authors is provided in Chapter 2, as well.

**Constituents.** Within this research, constituents are defined as the various members of a higher education institution that have individually or collectively have an interest in the values and actions of the institution. Constituents exist both within and external to the institution, and may include such groups as students, faculty, administrative staff, alumni, board members, parents, and others. Constituents are generally represented by others in some manner relevant to decision-making, but may take steps to ensure that their voices are heard in the decision-making process.

**Decision-making context.** Decision-making context will be used to include the comprehensive circumstances of the situation within which the decision-making process occurs, as well as the perceived implications and/or consequences of the decision in question. This would include but not be limited to discussion of drivers and influences that suggest or prompt the need for a decision. Context also includes environmental factors and considerations of an internal and external nature, including cost, risk, potential benefits, constituent interests, possible resistance to alternatives, and similar factors. Context also includes parameters that may impose limitations on the decision-making process such as time, effort, availability of information, and similar factors.

**Shared governance.** Shared governance is an evolving concept in higher education, and various definitions exist. In this study, the definition provided by Bahls (2015) for the Association of Governing Boards website is used: “Shared governance is a set of guidelines about the various roles and authority of the board, faculty, and
administration in such things as academic decisions, budget decisions, selection of the president, and other operational decisions.” According to Bahls, shared governance manifests uniquely at different institutions, “but it should align the faculty, board, and administration in common directions for decision-making regarding institutional direction, supported by a system of checks and balances for non-directional decisions.”
Chapter 2: Literature Review

Literature Review Procedure

I performed extensive searches iteratively to develop a clear picture of previous work relative to this research, as well as gaps in the literature that need to be addressed. Searches included different online academic databases, and included peer-reviewed scholarly articles as well as theses and dissertations. A very broad, encompassing set of search terms were utilized, both individually and in combinations. In addition, the bibliographies of resulting works were analyzed for important citations that pertain to the questions surrounding this research. Finally, since a growing number of institutions utilize digital repositories to store the works of their institutional scholars, an extensive internet search was conducted to identify works that may not have been included in online academic databases. A summary of the results of the literature search was developed, as described and analyzed in the following. Seven categories divided into two general headings are utilized to arrange the information in a way intended to be helpful to the reader.

The Higher Education Context

Change and continuity. American higher education has a long history of institutional adaptation, and extinction. As Harrison and Mather (2016) observe, “Throughout the history of American higher education, many adaptive changes have taken place, and we should indeed continue to adapt and improve” (p. 162). However, history also records institutions that were not successful in adapting and ultimately did not survive. Included in this were institutions struggling with the challenge and corresponding decisions related to adhering to mission while attempting to remain viable.
As recounted by Rudolph (1990), over 500 institutions became extinct in America before 1860 as they resisted change and clung to their self-prescribed missions in the face of fundamental social and economic changes. Province (2009) conducted research on factors leading to closure of 40 private colleges between 1965 and 2005. From published accounts, numerous institutions currently face uncertain futures.

The past four decades are particularly relevant to the current environment, and therefore to the proposed research. A brief timeline for important milestones concerning related events within this timeframe is provided in the following brief account.

Breneman (1994) states that by the mid-1970s the basic financial structure of higher education that operates today was in place. In 1974, Bowen stated that the issue of accountability for higher education institutions was ultimately simple and straightforward: “It means that colleges and universities are responsible for conducting their affairs so that the outcomes are worth the cost” (p. 2). Bowen further noted that the efficiency of the higher education system was measured by comparing the outcomes with the resources employed to achieve the outcomes. Bowen’s position is important because it requires a thorough and comprehensive understanding of the inputs, activities, processes, costs, and outcomes of the educational process by the institution itself. This understanding is also fundamentally important concerning the decisions that institutions leaders must make.

Ewell (1997) reported that the focus of accountability for institutions during the 1980s was centered on learning and the value of the learning experience to the individual. This further emphasizes the shift in focus from input to outcome of the educational process, and the activities of institutions. By 1979, when the National Task Force on the
Accountability of Higher Education to the State released its report, the unchallenged public confidence in higher education was effectively at an end and calls became even greater for proof of effective management and outcomes. This was followed in 1983 by publication of the U.S. Department of Education report, *A Nation at Risk*, and in 1986 by release of the report *Time for Results* by the State Governors.

Breneman (2008) notes that much of the current public attitude toward higher education can be traced to the Reagan era of the 1980s when the free market was heralded as the best determinant of resource allocation, such that “The era of the privately financed public university was upon us” (p. 2). Aper and Hinkle (1991) observe that accountability of institutions came to be associated with efficiency, and state governments began to call for a number of quantitative measures concerning productivity and outcomes. These included such measures as number of graduates, expenditure per student, faculty workload, and others. An array of state-mandated programs followed that forced public institutions to direct efforts to measure and report on performance indicators.

Cave et al. (1997) note that the 1980s and 1990s reflected what they termed as “a growing preoccupation” with performance indicators that intended to measure outcomes. However they also note the tension that existed in higher education institutions at that time regarding the question of inputs versus outputs: “It has become increasingly clear that the measures used in the different studies reflect different constituencies with different stakes in higher education” (p. 73). Public discussion concerning the purpose, function, and value provided by higher education institutions was well underway by the 1990s.
Institutional efficiency and effectiveness had received little serious attention within institutions and among various constituent groups. By the 1990s, as the impact of budget cuts grew and public questioning increased, authors began to address the question more effectively. An example of this is provided by Rowley, Lujan, and Dolence (2001) who describe the transition from provider-driven to consumer-driven higher education. The authors note that this was accompanied by an increasing awareness that institutions had to deal more intentionally with the challenges of their competitive environments:

The realignment of higher education with its environment means that colleges and universities must recognize their roles and responsibilities in relation to a variety of internal and external constituencies. There really is no effective way of doing this other than to check performance against expectations (both the expectations that institutions have developed for themselves and the expectations of their constituents). Unlike mission-driven planning, planning that is based on a premise of measuring and checking performance against expectations provides an important and highly beneficial linkage between the institution and its environment. (p. 16)

Layzell and Caruthers (2002), along with similar articles of the time, advanced the linkage of tuition pricing to institutional efficiency and effectiveness, as well as the corresponding responsibility of institutions for controlling their costs. Following his dissertation in 1998, Eckel (2002) published a widely-cited article titled “Decision Rules Used in Academic Program Closure: Where the Rubber Meets the Road.” While not the only article in this timeframe dealing with the subject, this article in particular drew
attention to a new reality: “As intentional strategies, more and more institutions are
adjusting academic priorities and, in many cases, closing academic programs” (p. 237).
This marked an important time for decision-making in higher education concerning
issues at the very heart of institutions such as academic programs, tuition pricing, and
financial viability.

In 2006, Ehrenberg referred to the shifting fiscal ground of colleges and
universities as “The Perfect Storm.” However, the situation became even more difficult
for higher education with the second greatest economic downturn in U.S. history
by stating, “it is [now] critical to sever the iron bond between price and perceived quality
in higher education” (p. A38).

Many authors have argued that higher education in general has steadfastly clung
to practices and operations that are often centuries old (see e.g. Minogue, 2006; Zemsky,
2013). Perhaps not surprisingly, Standard and Poors recently described the not-for-profit
higher education sector as “increasingly volatile” and suggested the likelihood of
numerous credit ratings adjustments for institutions (Matsumori, 2013).

Cost, value, and competition. Breneman (2008) notes that much of the current
public attitude toward higher education can be traced to the Reagan era of the 1980s
when the free market was heralded as the best determinant of resource allocation. The
result of this period for higher education was a philosophy of shifting the cost of college
more to students in the form of higher tuition costs. Breneman further notes that states
sharply cut their state support for higher education because of lower tax rates, as well as
increased reallocation of state funds to other social programs such as K-12 education and
healthcare. Tuition costs and the proportion of institutional budgets derived from tuition and fees rose rapidly. This realization is important, because it represents the coalescing of both public and private institutions into a narrower economic niche characterized by similar cost models and greater mutual competitiveness.

Two general camps seem to have developed regarding the response of higher education to its current environment. These can generally be described as representing a traditionalist versus an adaptationist philosophy. Moreover, to a great extent these camps are divided along what has been termed “The Quality Question” in higher education (Glenn, 2010). As will be discussed in the following, this division involves the question of the inputs relative to outputs by colleges and universities. These considerations are within the decision-making by senior institutional leaders. And as noted by Richards and Coddington (2010), widely published measures used to represent college quality are hardly straightforward or mutually exclusive.

Eckel (2007) and similar writers represent the more traditionalist approach, which often involves what can appropriately be described as a protectionist view. While Eckel grudgingly states that competition is not always a negative force, he simultaneously holds that competition may work against important social objectives including those that are essential to a functioning democracy. To a great extent, proponents of this view hold to the premise that inputs (e.g. tenure-track faculty, small class sizes) are key to institutional success. Ferrall (2011) takes an even stronger position regarding competition and the impact it has had on liberal arts colleges. The author describes the impact as negative, to the point of being destructive. Ferrall suggests that the end result has been an increase in the cost of providing educational services, while simultaneously raising the price that
poorer students must pay for them. Engell (2005) pointedly calls this new reality “learning for dollars.”

A counter view involving a more adaptationist philosophy is offered by Rudolph (1990), Rowley et al. (2001), Rudy and Brubacher (1997), and numerous other authors. This view holds that higher education exists in a constantly changing context, where institutions either embrace change or become extinct.

The traditionalist and adaptationist camps represent divergent views concerning the way in which institutions respond to their environments. These views suggest that either the institutions change and adapt, or persevere on and attempt to avoid significant change. There are two important underlying realities tied to each camp. On the one hand, the traditional approach fails to take into account that the vast majority of private liberal arts institutions are heavily tuition-dependent. Student enrollment and the tuition derived from that enrollment is the lifeblood of the institutions. While these institutions do not seek profit as do businesses, they cannot operate with sustained losses. The simple reality is that a tuition-dependent institution cannot sustain its existence and the ability to fulfill its mission in a chronic budget deficit situation (see Breneman, 1994). Most institutions do not have sufficient operational reserves or endowments to survive without the consistent infusion of tuition dollars.

At the same time, the adaptationist camp invokes the discredited social Darwinist philosophy. This philosophy espoused a laissez faire approach, and suggested that if the weakest members of a group fail to adapt and are removed from the population, the remaining population will be stronger for it. Rudolph (1990) reports that over 500 institutions became extinct in America before 1860. It is difficult to see how this
ultimately made the remaining institutions across America stronger as a result of their demise. Another problem with the adaptationist view is that higher education institutions are far more complex than other organizations including businesses that attempt to function with the overarching goal of profitability. Bergquist and Pawlak (2007) address the complexity of colleges and universities including the six cultures that exist within these organizations. Private liberal arts colleges are complex organizations comprised of people who operate with differing reality constructs, value systems, and goals.

As Harrison and Mather (2016) observe, “Throughout the history of American higher education, many adaptive changes have taken place, and we should indeed continue to adapt and improve” (p. 162). Perhaps rather than divergent views concerning the survival of private liberal arts institutions, a better question concerns the survival of liberal arts education. Does the “morphing” (see DiMaria, 2010) of private liberal arts institutions described by Breneman (1994) represent an adaptive change, or does it represent the passing away of liberal arts education itself? Underlying this is the fact that liberal arts colleges are fundamentally mission-driven and for these institutions the concept of embracing change is often seen as being in direct conflict with adherence to mission and the factors that support realization of the mission.

In a historical perspective, Astin (1985; 1990) advanced a model for institutional assessment in the 1980’s based on a view of the purpose of higher education that he called the “talent development model,” with talent described as the intellectual and personal development of both students and faculty. Astin’s view was the result of what he termed a “major transformation of some of his own views of assessment” and premised on a larger and more practical mission for higher education in which “true
excellence lies in the institution’s ability to affect its students and faculty favorably, to enhance their intellectual and scholarly development, and to make a positive difference in their lives” (1985, pp. 60-61). Astin’s conceptual framework encompassed three interacting components: Input, Environment, Output. In the concept of assessment under this view, the goal would be to determine and optimize the “value add” provided by the institution that would be measured by the longer term impact the educational opportunities and experiences provided by the institution holistically contributed to the life and career of alumni. While Astin’s work led to broad and positive discussion in the literature concerning the purpose of education and the role of assessment, the ultimate impact of his work with regard to the vision and mission of higher education, as well as the role of assessment in measuring the contribution of the education provided by institutions, remains open to debate.

However, Astin’s work is important in another way that is directly relevant to this study. Astin’s talent development model is related to Bergquist and Pawlak’s (2007) work. The authors describe six cultures that operate in academic institutions, within which decisions must be made and implemented: Collegial, Managerial, Developmental, Advocacy, Virtual, and Tangible. They note that the Collegial and Managerial cultures date back to the very origins of higher education in America. The authors note that the Collegial culture is very common in liberal arts colleges.

Astin’s talent development model has many parallels with Bergquist and Pawlak’s Developmental Culture. Bess and Dee (2012) provide a useful and concise explanation of the Developmental Culture by stating that it “is found in organizations that promote human growth and professional development” (p. 377). They further note that “The
primary valued outcome of organizational behavior is ongoing learning, not just for students, but for faculty, staff, and administrators as well.” The way in which higher education institutions come to the ability to understand and respond to their environments, including corresponding decision-making, is an area of investigation in this research.

A traditionalist view of institutional operation such as that held by Eckel (2007), Engell (2005), Ferrall (2011) and others suggests that competition and fulfillment of institutional mission are mutually exclusive. To state this position somewhat differently, institutions are synonymous with the concept of higher education in America, and institutions should simply be left alone to do what they do. This view reflects a philosophy that is widely held and heavily entrenched, particularly among a generation of educators and administrators whose influence in institutional decision-making remains strong. Glenn (2010) describes this as being “institutionally rigid.”

Generally, “the quality question” involves the relative importance of inputs into the educational process (e.g. number of tenure-track faculty, small class sizes), and outputs realized form the educational process (e.g. persistence rate, numbers of graduates, contribution to the workforce). As the Lumina Foundation (2012) notes:

And in serving today’s students, that word “value” is important because it points to the second change that’s needed. That is: a redefinition of “quality” in higher education — one rooted, not in the concept of inputs (large endowments, impressive facilities, highly selective admission policies, steep tuition costs), but in the idea of outputs (the knowledge and skills that graduates actually demonstrate). (p. 3)
The relative balance between inputs to the educational process and outputs from that process is important, particularly in decision-making by institutions. This presents institutional leaders with decisions related to revenue generation, the allocation of resources to operate the institution, and the nature and quality of academic programs. As a result, it speaks to the sustainability and survivability of the institution.

Importantly, the issue of outputs by higher education has also become an important consideration for prospective parents and students in terms of return on investment (ROI). This concerns the relationship between a college degree and a well-paying job (see Nemko, 2008; Schneider, 2012; Bennett, 2013). Ferrall (2011) terms this “careerism” and observes it has led more college students to seek degrees with a higher probability of helping them achieve a good job that pays well.

**Institutional responses.** In the face of budget cuts for colleges and universities in the 1970s, Breneman notes that institutions had done little more than reestablish balanced budgets by cutting expenditure growth. Concomitantly, institutional efficiency and effectiveness had received relatively little serious attention within institutions. By the 1990s, as the impact of budget cuts grew and public questioning increased, authors began to address the question more effectively. The realization that colleges and universities were no longer immune to sociopolitical and economic changes began to be openly discussed in the higher education literature during this time. And a fundamentally important point had now been suggested: institutions must adapt to their environments, rather than continue to ignore them. As Minogue (2006) specifically states, “The 20th century university is obsolete.” He further speculates on what is to become of the majority of institutions today:
What will be the destiny of the current life form we have called the 20th century university? It consumes far too many resources for what it returns to the environment, and though there are vast resources (markets) available, its structures do not let it tap these resources effectively. (p.3)

As the operating budgets of tuition-dependent institutions declined, the question of efficiency and effectiveness relative to continuing increases in tuition costs became more pressing. The growing competitive market for tuition-paying students within the higher education ecosystem resulted in growing challenges for institutions without large national followings or sufficiently large endowments to insulate them from the financial pressures (see Van Der Werf & Sabatier, 2009; Kiley, 2011).

**Liberal Arts Colleges**

The Association of American Colleges and Universities (2014) defines a liberal arts college as, “A particular kind of institution – often small, often residential – that facilitates close interaction between faculty and students, and whose curriculum is grounded in the liberal arts disciplines.”

Much has been written in recent years concerning the plight of small private liberal arts institutions, and they are widely seen as being in decline. Yet many authors have also observed that liberal arts colleges have been troubled for quite some time. As Breneman (1994) observes, “the literature on the private (or independent) college portrays a nearly unbroken history of concern for its survival.” As Ferrall (2011) states, “with the exception of the few very wealthy colleges, all liberal arts colleges have struggled financially for a long time” (p. 37). As he states, “There has, of course, long been a demand for liberal arts colleges and the degrees they award, but it is far from clear
that there has ever been any significant demand for the liberal arts education they provide” (p. 40).

As Francis Wayland, then President of Brown University, said in 1850 concerning the traditional curriculum based on the Classics in place nearly universally at that time: “We have produced an article for which the demand is diminishing. We sell it at less than cost, and the deficiency is made up by charity. We give it away, and still the demand diminishes. Is it not time to inquire whether we cannot furnish an article for which the demand will be, at least, somewhat more remunerative?” (quoted from Rudolph 1990). “A broad liberal arts education, with a significant opportunity to explore oneself and the world, is increasingly seen as a luxury for the entitled, one that is scarcely affordable in a hypercompetitive world” (Roth, 2014, p. 2).

Breneman (1994) notes that fundamentally, liberal arts colleges represent both an educational and an economic type. He offers an excellent discussion of the economic nature and financial aspects of these institutions. Breneman reports that the period between 1958 and 1989 reflects relative stability for liberal arts colleges concerning revenues, with tuition comprising the bulk of revenue. However expenditures during this period showed change in several ways. Costs for administration rose from 18 to 26% of operating budgets, and student services increased from 9% to 12%. Percentage of funds devoted to instruction declined from 50% to 38%. Spending on operations and physical plant also declined. Breneman notes that administrative demands have grown more complex, and increased responsibilities and growing competition has resulted in growth in administrative areas including development, admissions, student aid, and student services.
As noted earlier, Breneman states that most higher education institutions navigated the 1950s through the 1980s relatively well, even with the reductions in state support coming in the 1970s. However, the United States Congress commissioned a study of higher education institutions in the early 1970s because of “congressional concern regarding the financial problems experienced by the Nation’s postsecondary institutions and the belief that these institutions represent an important national resource.”

A corresponding report published by the Comptroller General of the United States in 1978 was titled *Problems and Outlook of Small Private Liberal Arts Colleges*. This report noted the following.

A category of schools in most severe financial trouble during 1975-76 was the small private liberal arts college. Many have:

- experienced extensive deficit operations,
- borrowed substantially to cover current operating deficits, and
- been delinquent in debt service payments.

School officials advised GAO that their problems were due to

- insufficient revenues attributable primarily to declining enrollments,
- inflation and rising costs, and
- lack of prompt and effective administrative controls. (p. i)

The classification of liberal arts colleges has also been subject to change over recent decades. Breneman (1994) reports that in 1987, the Carnegie Foundation classified 540 (16%) of the nation’s 3,389 colleges and universities in existence as private liberal arts colleges and divided them into two groups, Liberal Arts I and Liberal Arts II. Ferrall (2011) records that in 1994 the Carnegie Foundation completely revised its
definitions and began classifying all institutions on the basis of the higher degree conferred. The Liberal Arts College classification was replaced by Baccalaureate College I and Baccalaureate College II. In 2001, Carnegie again changed the classification descriptions and definitions, with the previous Baccalaureate classifications then being changed to include 15 possible categories, including “arts and sciences focus” in which at least 80% of bachelor degrees go to majors in the arts and sciences. Ferrall asserts that the current Carnegie classification scheme is ultimately of little help in deciding which colleges are liberal arts colleges.

Many authors and researchers have developed a more functional definition for liberal arts colleges. Ferrall (2011) provides the following definition:

Today, most liberal arts colleges are small, residential, often located in a rural setting, and devoted primarily to educating undergraduates. Student enrollment is typically between 1,000 and 2,500. Students can, and usually do, know a substantial percentage of their classmates. Students and faculty often interact outside the classroom. Most instruction is provided by full-time tenured or tenure-track professors, not graduate students or teaching assistants. Classes tend to be small; large lecture courses are the exception. Course enrollments of fifty students are uncommon, and those with twenty or fewer are the norm. (p. 13)

Breneman (1994) noted that liberal arts colleges represent both an educational and an economic type. Educationally, he notes that they have the following characteristics:

- award the bachelor of arts degree
- residential
- primarily enroll full-time students between 18 and 24 years of age
• limit the number of majors to roughly 20 to 24 fields in the arts, humanities, languages, social sciences, and physical sciences
• rarely enroll more than 2500 students; most enroll 800 to 1800 students
• education is “preprofessional” as many students enroll in graduate or professional programs after graduation; however the liberal arts college itself offers virtually no professional education.

Economically, these institutions:

• have revenue and cost structures that are easily compared because they derive from institutions with similar programs and purposes
• do not cater to current student concerns with the job market
• must compete with universities that provide many more courses and majors, as well as professional degrees in business, engineering, architecture, nursing, and education.

Breneman states that one of the most distinctive attributes of liberal arts colleges is “their commitment to their central educational missions,” which he describes as “education for education’s sake” (p. 3). Ferrall states that the “key distinguishing quality of liberal arts colleges is their singular commitment to teaching undergraduates” (p. 14).

Two of the most substantive developments linked to the declining demand for liberal arts education in recent years are the high cost of this form of education, coupled with the “careerism” that has led more college students to seek degrees with a higher probability of helping them achieve a good job that pays well (Ferrall, 2011). Kiley (2011) reports that private colleges without large endowments to help fund their
operations have sought other sources of revenue including undergraduate programs that are more aligned with helping students get jobs.

As stated by the American Council of Trustees and Alumni (2014), “Now, as the cost of attending liberal arts institutions has risen sharply and steadily, there is increasing pressure to define how these institutions add value commensurate with their high costs” (p. 2). The group further notes:

There is no question that students can still obtain an excellent education at our most highly-ranked liberal arts institutions. As long as admissions offices remain selective, the mere aggregation of smart students will create education. But, in too many places, it is also possible to invest a quarter million dollars in an education that ends in little intellectual growth, narrowed perspectives, and which qualifies the graduate for very little. (foreword)

As noted in a USA Today article (Marklein, 2013), graduates with a degree in liberal arts could nearly double their job prospects and increase their average starting pay by $6000 per year, if they supplemented their liberal arts degrees with technical skills.

As Breneman (1994) states, “We are indeed losing many of our liberal arts colleges, not through closures but through steady change into a different type of institution” (p. 13). The author observes that liberal arts colleges must compete with universities that provide many more courses and majors, and a “vast array of professional degrees in business, engineering, architecture, nursing, and education” (p. 12). Within this context, Breneman questions whether liberal arts colleges are “one of the hardiest of institutions, or one of the most fragile” (p. 1). Ferrall (2011) describes liberal arts institutions as being “at the brink” and states that “Today, liberal arts colleges are in
trouble” (p. 3). Indeed, he describes the situation as “dire” (p. xii). The consequences of institutional decision-making in this context are enormous, as they related directly to continued survival.

**Decision-Making**

The decision-making process occurs at many levels of organizations, and occurs along a continuum from operational to strategic (Mintzberg et al., 1976). Harrison and Pelletier (1995) state that, “The preeminent characteristic of strategic decisions is their significance for the long-term health of the total organization” (p. 53). The authors also note that such decisions are important to the organization, “either because of the scope of their impact and/or because of their long-term implications” (p. 53). The authors report that strategic decisions are usually highly complex, and involve numerous dynamic variables.

Mintzberg et al. (1976) stress the need for strategic decisions, arguing that top level decisions are essential for driving institutional change in positive directions. As they state, focusing instead on simply improving operational decisions means institutions “may well cause organizations to pursue inappropriate courses of action more efficiently” (p. 246). As noted previously, Harrison and Pelletier (1995) state that strategic decisions are usually the product of the top management team, including the senior managers reporting directly to the chief executive. For colleges and universities, the senior managers typically represent the president’s cabinet.

Dean and Sharfman (1996) reported research findings that decision processes influence strategic decision-making. They found that procedural rationality, the extent to which information relevant to the decision was collected and analyzed as a component of
the decision-making process, was positively correlated to decision effectiveness. Dean and Sharfman found that effective managers focused on collecting information and applying analytical techniques. Bess and Dee (2008) state that information is the lifeblood of colleges and universities. They observe that while it is an essential element in teaching, learning, and research, it is also a critical part of decision making, “since both long-term and short-term planning and the execution of actions to achieve institutional aims rely on information.” But they simultaneously observe that, “Too much, too little, or the wrong kinds of information can lead to inefficient and ineffective decision making.” Buchanan and O’Connell (2006) describe the way humans have attempted to supplement cognitive ability with computational power. The authors note the way leaders have wrestled with bounded rationality; that is, that organizational leaders ultimately make ‘good-enough’ decisions for a number of reasons including insufficient relevant information. The implication is that people would make more economically rational decisions if sufficient relevant information could be gathered and made available. Structured, rational processes based on quantitative methodology alone are often focused on optimization. That is, confidence in decisions derived through iterative data gathering and refinement of mathematical computation will steadily increase as the process continues and the results are iteratively refined.

Breneman (1994) proposed a two-stage optimization process for liberal arts institutions. The first-stage optimization, he proposed, would focus on setting the desired enrollment, as well as creating the inputs (faculty, staff, facilities, and so forth) needed to serve that enrollment at a financially sustainable quality. In the second stage he proposed, the college seeks to increase the quality of its student body, faculty, and
facilities as much as possible, given the decisions about size made in the first stage, and
subject to budget constraints. Although informative, I would argue that Breneman’s
proposed model includes both assumptions and constraints that significantly limit any
practical ability it may have. Among those are issues relating to the assumption of static
conditions within the internal and external environments, the assumption that the nature
of the institution will not ultimately change, and that an institution could “tune” its
operations sufficiently to ensure continued viability. Many authors challenge the
fundamental assumptions underlying the optimization principle when applied to human
decision-making in real-world situations. As Gigerenzer and Senten (2002) state:
“Models of rational decision making in economics, cognitive science, biology, and other
fields, in contrast, tend to ignore these constraints and treat the mind as a Laplacean
superintelligence equipped with unlimited resources of time, information, and
computational might” (p. 37).

Numerous authors (e.g. Senge, 1990; Gigerenzer & Senten, 2002; Buchanan &
O’Connell, 2006) also argue that models of rational decision-making alone are
misplaced, and that a more holistic model of decision-making including more qualitative
and subjective factors such as human intuition are necessary. Buchanan and O’Connell
state, “of course the gut / brain dichotomy is largely false” (p. 41). Senge (2006) argues
that leaders “cannot afford to choose between reason and intuition, or head and heart, any
more than they would choose to walk on one leg or see with one eye” (p. 157).

Agor (1989) states that managers are as likely to use intuition as they are to use
systematic analysis of data to support their decisions. Bess and Dee (2008) discuss
affect-based decision-making, which recognizes that decisions are often based on
immediate, emotional responses. They also note that individuals almost invariably employ heuristics, or rules of thumb that they have found to have been reasonably successful in dealing with similar situations in the past. Eckel and Kezar note that in the current socioeconomic environment for higher education, the most promising strategies will likely combine the “straightforward with the unconventional” (p. 10).

The Association for Institutional Research (AIR) is the professional organization for institutional research professionals at colleges and universities. According to the organization’s website (2013), instructional research professionals are responsible for collecting, analyzing, and converting data into information that supports decision-making in higher education. As AIR (2013) boasts on its website: “In short, most of the important decisions made on campuses regarding an institution's most vital programs and responsibilities are based on analytics produced by IR professionals.” At colleges and universities, the widely-practiced convention is that a director of institutional research (designated DIR in this study) is responsible for coordinating the production and delivery of this information for the institution. Bergquist and Pawlak (2007) have noted the importance of the institutional research function and the information produced by the corresponding functions at institutions:

Institutional research has become increasingly important at many colleges and universities for this very reason. One must understand and appreciate one’s own institution to be an effective academic leader. The administrator or faculty member who has received and can understand budget reports, student attrition figures, and employment projections commands more respect than the
an administrator or faculty member who has other abilities but has no access to this information or does not understand it. (p. 70).

Few would argue that effective navigation requires dynamic decision-making, and readily available, near real-time information is conducive to sound decision-making. And therein exists a fundamental problem with the way information including KPIs are currently utilized in higher education. Today, likely somewhat as a result of their history of use in performance funding by states, KPIs are frequently utilized to report results. As Ewell (1994) notes, performance indicators are by their very nature historic, representing the results of decisions and transactions that have already occurred. This is a very important note, because institutional decision-makers cannot afford to steer the institution forward merely by looking in the rearview mirror for what happened last year, and even further into the past.

**High-impact institutional decision-points.** While colleges and universities are exceedingly complex environments, there are key factors that acting together are recognized for the substantial impact they have on institutions in both the short and long term. These factors include, among others, published tuition price, financial aid, freshmen discount rate, net tuition revenue, full-time equivalent enrollment, size of entering freshmen class, academic profile of entering freshmen class, selectivity, freshmen retention rate, six-year graduation rate, creation and removal of academic programs, and U.S. News rankings (State Higher Education Executive Officers, 2013; Denneen & Mankins, 2011; Gansemer-Topf & Schuh, 2006; DesJardins, Ahlburg, & McCall, 2006; Sloan, 2009; Pullaro, 2013). Breneman (1994) and Ferrall (2011) provide excellent discussions of the factors involved in decision-making at liberal arts colleges.
Of particular significance is the fact that Ferrall states liberal arts colleges engage in extensive tuition discounting, reflecting a decision-point for senior leaders.

That institutional leaders engage in this decision-making is well established (see e.g. Garrett, 2007). In writing for the National Association of University Business Leaders, Doti (2011) describes tuition pricing as a “strategic tool” (p.2) employed by many institutions, and Pullaro (2011) reports that numerous decision-points play into strategic enrollment efforts including maximizing net tuition revenue and shaping the incoming class. Denneen and Mankins (2011) along with other authors have also noted the steps institutions are taking to reduce inefficiencies.

Breneman (1994) studied 212 liberal arts institutions with regard to financial circumstances and corresponding decision points in the context of educational purpose and mission. He noted that the complicated interaction of tuition, enrollment, composition of the student body (quality and diversity), and financial aid is central to the financial welfare of private colleges, but that this critical area of college finance is not well understood on many campuses. As a result of his analysis of the numerous factors concerning both costs and revenue that are vitally important to institutions, Breneman concludes that, “In summary, net tuition revenue –not gross tuition revenue– is the financially meaningful measure that most colleges should be tracking” (p. 47).

**Performance measures.** Performance measures have gained widespread use in higher education over the past three decades, particularly because they were seen as useful tools that could be used to link performance funding from states to institutional allocations. Miao (2012) reports that in the period between 1979 and 2007, 26 states implemented performance measures for higher education institutions. It is important to
note that while institutions adapted to these measures of performance, in many cases they reflect an external locus of control rather than an internal management and planning structure embraced by the institution and its constituents.

Nevertheless, “data” became an increasingly important part of the higher education conversation over past decades. Notably, the conversation even today at many institutions continues to center around the word and concept of “data.” The need to move from data to information has been discussed at both the practical and policy level in higher education for at least twenty years. For example, in 1995 the National Center for Educational Statistics (NCES) published a report entitled “From Data to Information: New Directions for Education Statistics” (Hoachlander et al., 1996). This work is significant for several reasons, as noted by the Commissioner’s Statement accompanying the report (Griffith, 1996). In that statement, the term data was clearly and intentionally replaced with the term information. The context for the work was also tied explicitly to educational reform, efforts to adopt both curriculum and performance standards, and the examination of American education within an international context.

**Key performance indicators.** In 1979 John Rockart of the Harvard Business School published research that used the term “critical success factors” in describing the executive information system concept, based on the realization that there are critical things companies must do in order to succeed. As noted by Watson (2009), the term critical success factor was later replaced by the term “key performance indicator,” or KPI. Parmenter (2007) defines KPIs with more specificity as “a set of measures focusing on those aspects of organizational performance that are the most critical for current and future success of the organization” (p. 3). Rowley, Lujan, and Dolence (2001) define
KPIs as “a measure of an essential outcome of a particular organizational performance activity, or an important indicator of a precise health condition of an organization” (p. 108). Dashboards are visual representations of key performance indicators displayed in some easily understood manner. Eckerson (2006) states that dashboards display the status of key performance metrics at a glance so that the actionable information needed to solve problems quickly, efficiently, and effectively is readily available.

As institutions came under more scrutiny from state legislatures and governing boards, the members of which included members of the business community, the notion of KPI found its way into discussions concerning the performance of colleges and universities. KPIs have gained widespread use in higher education over the past two decades, particularly because they are seen as useful tools that could be linked to performance funding. Miao (2012) provides a useful history of performance-based funding for higher education.

It is not surprisingly that KPIs have not been received well by many in higher education, particularly faculty. Bruneau and Savage (2002) published an entire volume criticizing the use of KPIs, suggesting that they have no place in measuring the value of the educational process. KPIs have nevertheless become commonplace in the higher education environment for policy analysts and lawmakers, prospective students and their parents, the public at large, and institutional leaders. Moreover, KPIs are a component of the basis for a number of published rankings of institutions such as U.S. News and World Report that influence college choice (Howard, 2002).
History of Information-Based Decision-Making

As observed by Buchanan and O’Connell (2006), humans have perpetually sought new tools and insights to deal with the imperfection of decision-making. As they note, “from entrails to artificial intelligence, what a long, strange trip it’s been” (p. 32). For both public and private sector organizations, decision-making is essential to operational management and effectiveness, as well as strategic planning and future positioning. Effective decision-making is consistently linked to marketplace competitiveness, and therefore organizational success (Davenport, 2006; Sabherwal & Becerra-Fernandez, 2011).

Dean and Sharfman (1996) utilize the term “procedural rationality.” They define this as gathering and using relevant information in a decision-making process to reach a decision. In a large research study conducted by the authors across 24 companies, they found that the use of information by decision-makers supported strategic decision-making effectiveness.

Gigerenzer and Senten (2002) describe the relationship between decision-making and information, particularly concerning the availability of the information as it is needed:

Unbounded rationality encompasses decision-making strategies that have little or no regard for the constraints in time, knowledge, and computational capacities that real humans face. For example, models that seek to maximize expected utility or perform Bayesian calculations often must assume demonic strength to tackle real-world problems. Real decision makers (as opposed to participants in an experiment in which all information is already conveniently laid out in front of
them) need, first of all, to search for information. This search cannot go on indefinitely; it is constrained by time, money, attention, or other finite resources. (p. 38)

The search for better information to support decision-making is a longstanding human endeavor. Not surprisingly, there has been a strong relationship between technology and the pursuit of better information. This was particularly the case in the mid to late 20th century. For example, interest and research in technology was intense surrounding World War II with extensive research at American universities continuing into the 1960s. As Watson (2009) notes, the first computer systems widely available were developed for scientific and transaction processing. Power (2007) suggests that the first attempts at decision-support models occurred in the mid-1960s, simultaneous with the development of minicomputers and multitasking operating systems.

The term “decision support system” (DSS) was originated by Michael S. Scott Morton, a doctoral student at Harvard in 1964, and by the 1970s the term was in widespread use (Power, 2007). John Little’s (1975) research further advanced the theory and use of decision support systems. Beginning in the 1970’s, businesses began to develop and use decision support systems in an effort to better address complex issues and decisions. These systems used structured information analysis to help improve decisions such as revenue optimization (Williams & Williams, 2007). The term “management information system” was coined by Gordon (1974) and defined as “an integrated man/machine system for providing information to support the operations, management, and decision-making functions in an organization” (p. 5).
In 1979 John Rockart of the Harvard Business School published research that led to the development of the executive information system (EIS) concept. Rockart argued that in order to be truly effective, information systems used by decision-makers such as chief executive officers (CEOs) of businesses should provide these leaders with information about the key functions the business must do well in order to be successful. He used the term “critical success factors” to denote these functions. An important focus of his work was therefore on the use of information systems to display critical business success metrics. As noted by Watson (2009), the term critical success factor was later replaced by the term “key performance indicator.”

The 1990s saw the development of a range of new types of specialized computer systems and applications focused on enterprise support of business operations. These included enterprise resource planning (ERP) systems, supply chain management (SCM) systems, and customer relationship management (CRM) systems (Williams & Williams, 2007). Though more sophisticated and functionally differentiated, these functionally segregated systems continued to be primarily transactional and to function at a business operations level. In order to make information retrieval from these transaction systems faster and more efficient, data warehousing technology advanced aggressively, particularly during the late 1980s and throughout the 1990s. The resulting datasets significantly enhanced the speed and consistency of data from the transactional systems for reporting and analysis.

Executive information systems have been replaced by analytical applications, often referred to simply as analytics. Watson (2009), Sabherwal and Becerra-Fernandez (2011), and other authors have described the development of technology to support
decision-making in the past decade as including online analytics processing (OLAP), dashboard / scorecard applications, and significantly improved data visualization. Olszak and Ziemb (2007) describe this as an evolutionary phase of business intelligence (BI). The authors describe the way these technologies comprehensively support the developmental from data to information, information to knowledge, and knowledge to decisions.

Organizations have continued to struggle with the need for information to help them adapt and succeed. In 1998, Peter Drucker stated, “For top management tasks, information technology so far has been a producer of data rather than a producer of information—let alone a producer of new and different questions and new and different strategies” (p. 2). Williams and Williams (2007) argue that even now organizations are still very much “data-rich but information-poor” because they lack sufficient analytical tools and actionable information to support effective decision-making.

In 1989, Howard Dresner, a consultant working for the Gartner Group, coined the term “business intelligence” to describe information systems that provide a more holistic view of the state of the organization to members throughout the organization. Popovič et al. (2010) provide a thorough review of the history of business intelligence, including a number of definitions by previous authors. Negash (2004) states that BI is a natural outgrowth of a series of previous systems and methodologies to support decision-making.

Business intelligence derived from two paths of rapid development over the past decades: 1) the maturation of information technologies that enabled the creation of information and knowledge from raw data (see Negash, 2004); and, 2) an increasingly competitive business environment in which more effective operational management and
strategic decision-making favored organizational survival and success (e.g. Dean & Sharfman, 1996). Today, business intelligence is widely regarded as the most advanced capability currently in practice to assist organizational leaders with decision-making. The purpose of strategic business intelligence is to enable the organization to achieve competitive advantage by redefining the competition in a way that is favorable to it (Liebowitz, 2006; Sharp, 2009; Vitt et al., 2008).

Although structured data processing and analytics are readily associated with decision-making, both structured and unstructured information are essential components of actionable intelligence (Rao, 2003; Baars & Kemper, 2008). Quantitative and qualitative information are both required, and to be effective they must be formulated into information that has been described as actionable. Mayfield (2009) uses the term actionable intelligence and defines it in this way: mission-critical knowledge that is in a usable form and readily available when and where needed to work toward organizational goals or improve market position relative to competitors.

There are two important, differentiating concepts in Mayfield’s description of actionable intelligence. First, the term knowledge is intentionally invoked, rather than data or information. Mayfield makes this differentiation as follows:

Knowledge has to do with acquaintance and familiarity, with being aware of something, or understanding something. Intelligence, in contrast, has to do with the ability to adapt and learn, to think abstractly and to take knowledge and use it to manipulate the environment. A competitive advantage from actionable intelligence is gained through the productive internal exchange of insights that help individuals think differently as they make decisions and take actions. This is
a far higher bar than the one for exchanging information, because individuals
must be persuaded that the knowledge they are being asked to acquire is superior
to what they already know. (p. 18)

Sabherwal and Becerra-Fernandez (2011) expand upon the differentiation:

Knowledge is intrinsically different from information. Instead of simply being a
richer and more detailed set of facts, knowledge in an area is justified beliefs
about relationships among concepts relevant to that particular area . . . [Thus,]
knowledge focuses on beliefs about relationships among concepts, with the
beliefs being justified in some way, such as through logic (including mathematical
proofs) or empirical observations. (p. 5)

In the model provided by Sabherwal and Becerra-Fernandez, there are three
developmental levels: knowledge is derived from information, which is in turn derived
from data. The authors describe data as being comprised of facts, observations, or
perceptions which may or not be correct. Data may include such entities as raw numbers
or assertions of fact, and therefore lack “meaning, context, or intent” (p. 4). Information
is defined as a limited and specific subset of data that possesses context, relevance, and
purpose. Information provides “a more meaningful indication of trends or patterns in the
data” (p.5).

The second differentiation made by Mayfield concerns both usability and
availability. The critical notation made by Gigerenzer and Senten (2002) concerning the
practical constraints affecting real-world decision-making provide an important context
here. To support real-world decision-making, particularly in highly dynamic
environments such as business, the information must be in a usable form and have high availability. As Mayfield describes, the knowledge should be actionable.

Analytics is an important and widely used concept today, and its relationship to business intelligence must be noted. Specifically, a critical differentiation between analytics and business intelligence is needed concerning both definition and conceptual placement. Analytics and other forms of quantitatively-based decision support methods are neither equated to business intelligence, nor regarded as separate disciplines. As defined by Laursen and Thorlund (2010) analytics is “an advanced discipline within business intelligence” (p. xxi). This is a fundamentally important distinction and one that is increasingly noted in the literature. The distinction is also important with regard to the proposed research.

Davenport, Harris, and Morison (2010) define analytics as “the use of data, analysis, and systematic reasoning to make decisions” (p. 4). By its nature, analytics is quantitative in practice, and therefore involves structured data. The authors note that within an organizational context such as business, the ultimate value of analytics is to help the organization perform better. While operational effectiveness is usually an imperative for both public and private sector organizations, it does not equate to increased competitiveness. This is a crucial distinction because as stated by Porter in his seminal paper on the subject, “operational effectiveness is not strategy” (1996). That is, operational information does not address critical strategic issues such as the moves of competitors, sociocultural developments and trends, the implications of an increasingly global marketplace, and numerous other factors.
While analytics has the opportunity for helping to guide strategic decision-making, it is incomplete for two reasons. First, to date analytics has largely been applied to operational effectiveness. The second reason that analytics and other methods applied to structural data are insufficient is that structured data do not provide the entire picture of the organization and its opportunities (see Negash, 2004; Rao, 2003; Baars & Kemper, 2008).

**Structured and Unstructured Information**

Numerous authors (e.g. Rao, 2003; Baars & Kemper, 2008) have stated that business intelligence encompasses both structured as well as unstructured information. Baars and Kemper define structured data as “data that is assigned to dedicated fields and that can thereby be directly processed with computing equipment (p. 132).” Structured data are most often numeric in nature and are used for quantitative functions.

As Negash (2004) observes, in many sectors and application domains critical sources of information are unstructured, or at best semi-structured. Unstructured information could include customer emails, competitor webpages, sales force reports, project plans and reports, operational memos, invention proposals, research notes, and numerous others (Negash, 2004; Rao, 2003). As noted by Rao (2003) and Baars and Kemper (2008), the challenge is finding ways to construct and integrate a business intelligence capability that makes both structured and unstructured information readily available. Further, to do so in a manner that meets Mayfield’s definition of actionable intelligence. Ultimately, business intelligence is widely considered to be a holistic and comprehensive approach employed by organizations to support effective decision-making.
Mayfield’s (2009) use of the term *actionable intelligence* is particularly germane here because it provides three characteristics for effective business intelligence: 1) mission-critical knowledge; 2) in a usable form; and, 3) readily available when and where needed. Sabherwal and Becerra-Fernandez (2011) also emphasize the fact that information should be provided in a “friendly fashion” to be effective, and specifically suggest such presentation formats as scorecards and dashboards (p. 6). They also emphasize the need for information to be provided in real-time “so that business processes are not slowed down in any perceptible fashion due to waiting for information or knowledge” (p. 7).

The implications of both currency and context can be understood and appreciated when viewed within the concept of bounded rationality as discussed in Gigerenzer and Senten (2002). As they note, real-world decision-making exists within constraints of limited resources, time, information, knowledge, intellectual and computational ability. As Gigerenzer (2002) states: “Real decision makers . . . . need, first of all, to search for information. This search cannot go on indefinitely; it is constrained by time, money, attention, or other finite resources.” (p. 38) This underscores the issues of intentionality and sustainability with regard to business intelligence, and why Sabherwal and Becerra-Fernandez (2011) therefore state that all business intelligence must be real-time.

Watson (2009) comments, “the final target [of business intelligence] is *organizational transformation* where BI is used to fundamentally change how a company competes in the marketplace” (p. 492). To be effective, he concludes, business intelligence should support a new business model and enable business strategy. To achieve this requires a holistic organizational capability. As Mayfield (2009) states, the
cultural capacity of an organization to access, understand, differentially select, and act upon information is a critical differentiator concerning business intelligence. Howson (2008) observes that “without people to interpret the information and act on it, business intelligence achieves nothing” (p. 1). Indeed, Howson (2007) and La Grouw (2008; 2009) both note that business intelligence is far more of an organizational capability than a technological capability.

**Review of Previous Research**

**Key performance indicators.** Doctoral students readily embraced opportunities to study performance indicators and performance-based funding. As a result, numerous dissertations were produced in this area within the U.S. (Keller, 1999; Lee, 2001; Davis, 2003; Berry, 2008; Marcus, 2003). Canada was similarly very active concerning performance-based funding and the use of performance indicators across provincial governments. Consequently, a number of dissertations concerning performance indicators have been produced by doctoral students at Canadian institutions (Kerr, 2000; Callahan, 2006; Hudson, 2007; Harvey, 2005; Richards, 2003).

**Planning and resource allocation.** A number of studies appeared in dissertations concerning issues more proximal to this research. Tesfamarian (2011) conducted research on the relationships of resource allocation and higher education performance. The author focused on the relationship of spending for instruction, student services, academic support, scholarship and fellowship, and institutional support, to graduation rates. Tesfamarian sought to develop information that would support institutional decision-making with regard to strengthening graduation rates. The findings suggest that activities directly supporting student learning should receive priority.
Tesfamarian also noted that institutional decisions are consistently made in the context of competing needs and priorities.

Blekic (2011) investigated institutional sustainability from the perspective of organizational effectiveness. Her research sought to identify the measures of institutional effectiveness in public colleges and universities that allowed them to operate in a sustained manner over a long period of time while meeting the needs of their constituencies. Blekic noted that the lack of criteria concerning effectiveness in higher education as a constraining factor in such research. Not surprisingly, Blekic found significant differences in perceptions of effectiveness among constituent groups.

McKinney (2011) explored the complexity of the accountability demands confronting community colleges within the context of institutional effectiveness utilizing the Academic Quality Improvement Plan (AQIP) accreditation criteria. Malone (2003) investigated institutional effectiveness in colleges and universities in the Southeastern U.S. One of the two overarching questions Malone sought to answer concerned how data are used to influence decision making relative to institutional effectiveness.

Lattimore (2011) examined the relationship between market, political, and academic pressures on strategic planning though a case study of three community colleges in North Carolina. This study is useful in demonstrating the complex set of environmental factors affecting decision-making by higher education institutions.

A study involving mission-based schools was the research performed by Harbouk (2011). This study focused on revenue-based financial modeling by schools of education
at medium-sized, private, mission-based institutions. Harbouk used three schools in this study for comparison and triangulation. While this research does not directly focus on the use of information to support decision-making, Harbouk concluded that one important feature of successful responsibility centered budgeting (RCB) models is the availability of accurate and current information. Harbouk found that a chief benefit to the schools of education studied was greater flexibility and quickness in decision-making and action, specifically as it relates to adjusting to changes in the external environment.

Blanchette (2010) performed a very interesting study involving the decision-making process as it relates to allocation and management of physical space at three urban universities. She utilized a multiple case study approach to identify and contrast decision-making as it related to “space management on campus: the quality of space, the location of space, and the quantity of space.” Blanchette focused on classroom space, research space, and office space. This study is interesting on a number of levels. First, space is an institutional asset, the disposition of which typically crosses multiple organizational lines and involves different constituent groups. She approached this study with a focus on who has decision-making authority regarding space, and how decisions are ultimately made. Blanchette reported four overarching findings. First was the importance for institutions to have a well-defined decision-making process. Second was the importance for institutions to have knowledgeable decision makers who were involved in the decision-making. The third finding was involved delegating decision-making authority, such that those closer to the areas of decision-making were engaged in the process. And fourth was the need to have accurate quantitative and qualitative data to inform decisions. Part of Blanchette’s analysis focused on power within organizations,
including what she termed the power of people, the power of resources, the power of ownership and control, and the power of external influences. But she also investigated the use of “decision aids” such as computer technology in aiding the decision-making process. While she found that such tools were becoming increasingly common, she also reported that “it is important to note that a data-driven system alone cannot meet all the needs of multi-objective criteria which contain unquantifiable variables such as personal preferences, professional status, competing goals, and political influences, such as power and prestige” (p. 28).

**Studies relating to chief academic and chief financial officers.** Okigbo (2007) surveyed 332 academic officers from institutions representing the four 2006 Carnegie classifications (associate, baccalaureate, master’s, doctoral) concerning their views and expectations of institutional research (IR) offices and how their expectations relate to the use of institutional data for decision-making. She pursued seven questions in the study, and although minor differences between the four institutional categories surfaced, academic officers from all four institutional categories were found to have a “high regard for using data in their decision making process” (p. 168) and they also “placed a high premium on the work of their institutional research offices on their campuses” (p. 171). Notably, Okigbo found that academic officers with high expectations of the IR office were more likely to use data for decision-making. Factors predisposing the use of data included timeliness, accuracy, availability, reliability, currency, lucidity and conciseness, usability, and being understandable. Further, while the academic officers expected the current work performed by IR offices to continue, they also desired additional services including helping organizational entities engage in studies.
Nolasco (2011) compared the perceptions of presidents, chief financial officers, and chief instructional officers on strategic planning in a quantitative study of community colleges in California. Not surprisingly, she found significant differences between the three groups concerning perceptions of the effectiveness of the institution’s strategic planning process. One recommendation made by Nolasco as a result of the study was that presidents find more effective ways to have chief financial and chief instructional officers engage in strategic planning.

In a related study, Ford (2008) studied the perceptions of presidents, chief financial officers, and chief instructional officers on strategic planning in a study of community colleges in North Carolina. In describing the context for the study, the author noted the conflicting demands of financial and academic considerations on the institutions. Ford found that presidents were more optimistic than either CFOs or CAOs concerning the effectiveness of their strategic plans in making decisions using reliable data. Presidents also tended to be more confident in using the strategic planning process for general decision-making. Correspondingly, both CAOs and CFOs perceived the resulting strategic plans to be less based upon strong data than the presidents. This study brings into question the concerns among CAOs and CFOs about the availability, strength, and valid utilization of data in institutional strategic planning and decision-making.

Ward Ross (2002) researched the perceptions of chief executive officers (CEOs), deans, CFOs, and CAOs at 57 institutions that had implemented responsibility center budgeting. She found differences among the groups, with CAOs and CEOs reacting most positively to the survey questions. Ward Ross also found that two groups aligned most frequently in their perceptions: deans with CFOs, and CEOs with CAOs. This study
provides additional evidence of differences that exist among institutional administrators
concerning important issues such as budget and finance.

A study of faith-based private institutions by Williams (2010) investigated the
perceptions of CFOs and chief advancement officers concerning factors relating to the
escalating costs of higher education as well as potential sources of revenue and strategies
for cost savings. The author surveyed 49 senior-level administrators at institutions that
were members of the Council for Christian Colleges and Universities. Williams
concluded that those factors affecting rising costs at public institutions also affected cost
increases at private, faith-based institutions.

Garrett (2007) conducted a relatively large study of provosts and academic deans
at public doctoral / research and master’s institutions. Garrett investigated the decisions
administrators were most likely to make in the face of financial pressure. His research
revealed a notable pattern. Administrators who are not observing strong financial
pressure are more likely to implement unconventional strategies such as generating new
revenue, cultivating new sources of revenue streams, and promoting collaboration across
units. But administrators confronted with strong financial pressure were more likely to
take conventional cost-cutting actions they believe less healthy to the institution, such as
reducing faculty and staff positions. Garrett’s research findings are particularly relevant
because they reveal that leaders confronted with pressure make decisions differently,
even when they acknowledge the consequences of the decisions are less adaptive to the
institution.

Evans (2004) investigated methods for understanding, communicating, and
controlling costs associated with educating students at liberal art colleges through the use
of activity-based costing. He noted that useful, accurate, timely, and understandable information was vital to the process.

Redenbaugh (2005) conducted research at bachelor’s and master’s institutions and found that while institutions had built stronger financial monitoring and management tools over the past 20 years, CFOs utilized a range of tools and techniques that varied by both nature and effectiveness.

Pagel (2011) sought to address the link between strategic planning and resource allocation in a case study on Silver Mountain College, a community college in California. This study is relevant for a number of reasons, including the fact that Pagel reported the importance of information to successful strategic planning. Specifically, he notes that thorough information gained from internal and external environmental scanning is required for successful strategic planning and continuing improvement. He also notes that strategic planning is an organizational exercise, requiring stakeholder knowledge, appreciation of the environment, and the need for intentional change.

**Decision-making studies.** Cruz (2011) performed research at a public institution in Texas designed to investigate the impact of factors such as organizational culture, management strategy, and decision-making process on institutional effectiveness. Faculty measured institutional effectiveness as perceived by the faculty of the institution. Cruz reported results demonstrating that what he called “market culture” was the best predictor of institutional effectiveness. The author explained that this as focusing on customers, in this case students of the institution. Cruz went on to say that institutional strategies that were defensive in nature were most closely associated with institutional effectiveness. Conversely, the author stated that strategies that were creative and meant
to be proactive and offensive with regard to market opportunities were the least associated with institutional effectiveness. Of particular importance to this study is that Cruz concluded organizational culture and management strategies were better predictors of institutional effectiveness than decision-making processes.

French (2011) conducted an interesting study involving six faculty members and six administrative officers at a small private institution. The author explored the relationship between entrepreneurial decision making and institutional governance. The study focused on a single small, tuition-driven, private institution. As a result of the study, French reported that traditional mechanisms of institutional governance were not effective when coupled with entrepreneurship. Of importance to the current research is that French suggested institutions needed to adapt in order to survive.

In a research project conducted by Howard (2002), students’ use of institutional rankings in deciding which college to attend was investigated. Howard survived over 14,000 freshmen at 40 institutions in 13 states for this study. The author reported findings that were said to demonstrate that most students placed some level of importance on college rankings in deciding on a college to attend.

Mangano (2007) employed a multi-case method to study the ways that three senior leadership teams dealt with financial crises. The author reported findings showing that the members of the teams utilized three leadership styles. Mangano stated that the way these styles were used influenced the effectiveness of the teams concerning rational decision-making in dealing with the financial crises.

Morelon (2006) performed research that the author suggested would help identify factors that might move the institution toward more data-driven decision-making
concerning student learning outcomes. Of importance to the current research is that Morelon linked the institutional president’s leadership style to whether the institution came to rely more on data in making decisions. The author stated that when a president places value on what they called a “culture of evidence,” other members of the institution were likely to do so as well.

Morgan (2010) conducted research on decision-making by middle-income families in order to understand the kind of information the families used in order to select a college, and also to understand how they interpreted and assigned meaning to the information. Morgan reported that the families in the study relied more on cost and financial aid information provided by the institutions, as well as information from non-institutional websites. However, the findings also demonstrated that information provided by parents, friends, and neighbors was also incorporated into the decision-making in selecting a college.

Riley (2007) performed research concerning decision-making by enrollment planners at a large research university. Specifically, Riley sought to study the institution’s decision-making and response to an enrollment crisis that occurred at the institution. Of importance to this research are the considerations relating to decision-making that Riley incorporated into this study, including theoretical aspects of decision-making in higher education institutions. The author focused on the processes that comprised the decision making environment at the university over a five year period surrounding the enrollment crisis. Interestingly, as a result of the study Riley stated that they believed the Garbage Can Decision Making model (see Cohen et al., 1972) most appropriately described the decision-making at the institution concerning enrollment
during this time. Also important to the current research is that Riley referenced a “paucity” of literature on decision-making by university administrators. The current study seeks to help overcome this paucity of information concerning decision-making.

In another study of importance to the current research, Valero (1997) investigated the use of qualitative and quantitative methods in the decision-making process at twelve colleges and universities. The author reported that the administrators in the study had moderate knowledge about the techniques and that their level of use was low. This is relevant to the current study, as even though Valero’s research was conducted two decades ago, it is unknown whether the use of qualitative and quantitative methods in decision-making has changed in the interim. Another of the findings reported by Valero that is relevant to the current research is that there was not significant difference in the way academic and non-academic administrators used qualitative and quantitative techniques. However, Valero did observe that qualitative techniques were generally viewed more favorably by the participants than quantitative techniques.

Blevins (2001) conducted research on the association between organizational trust and decision-making in institutions. The author reported that communication and collaboration were positively associated with organizational trust in the decision-making process.

Clarke (2001) studied the perceptions of faculty and administrators regarding strategy and decision-making processes relative to institutional effectiveness. Among the findings reported by the author was that strategy was different for faculty and administrators, and that strategy was a stronger predictor of institutional effectiveness
than decision-making. Not surprisingly, Clarke also reported that participative decision-making was viewed more positively by the participants than less participative methods.

Corbett-Lourenco (2002) utilized a semi-structured, open-ended interview method in a research project with senior leaders to investigate the impact of performance funding and a 21% budget reduction on decision making, strategic planning, and governance. The author reported that performance funding and the financial situation confronting the participants had significantly impacted decision making, strategic planning, and business plan development. The participants also reported that the financial circumstances were in conflict with organizational goals.

Occurring at a very interesting time relative to higher education funding and policy initiatives, Fridena (1998) studied institutional decision making by a network of community college presidents. The results of the study were both interesting and informative relative to how groups of leaders in organized power networks approach similar environmental factors and challenges. Fridena found that community college presidents coordinated decisions and approaches to common problems that resulted in actions taken on individual campuses, that the power network of the presidents was highly evolved and effective, and that the leadership styles of the presidents “do not embrace democratic mechanisms.” While community colleges clearly are not reflective of other colleges and universities, this study does suggest a question to be pursued concerning whether senior administrators at other institutions coordinate their decisions and actions with corresponding officials at other institutions.

In a study related to information used in decision-making, Heise (2006) conducted research on the use of data warehousing technology by colleges and universities. The
reply rate in his research was relative low, which is not unexpected. Heise made several important observations. He noted that in contrast to the business world, higher education is less likely to adopt data warehousing and to apply it to decision-making. This matches similar observations from numerous other writers with regard to decision-support systems in higher education. Results from respondents also revealed that operational use ranked higher than tactical or strategic use, and that enrollment was the highest area of use with student information and financial budgeting ranking second and third. Notably, data warehousing was considered to be important to decision making. However data quality and resourcing were identified as implementation challenges that correspondingly limited use. Although this study is not current, it does provide additional support for the widely held perception that higher education trails the private sector regarding the use of business intelligence techniques.

Keeley (2004) conducted research investigating knowledge-management practices employed by institutions, and whether knowledge management was linked to planning and decision-making. The author also investigated the role of the institutional research function with regard to knowledge management. Keely observed that higher education lagged behind the corporate sector in knowledge-management. The results reported by Keely generally showed that higher education utilized knowledge management to a lesser extent than other sectors. This is important to the current research as the use of information to support decision-making is one of the areas of investigation.

Love (2005) conducted a research study among 831 faculty members at the University of Houston concerning their perceptions of shared governance, presidential leadership style, and decision-making. Love reported three primary findings from the
study. First, faculty perceived numerous benefits associated with shared governance. Second, they reported low perceptions of their value in decision-making on campus. Third, although they perceived benefits from shared governance, their participation level in shared governance and decision-making was low. Ironically, results also showed that even though their participation in decision-making was low, faculty reported being unsure about whether or not decision-making by the president was strategic.

Kerrigan (2010) studied data-driven decision making (termed 3DM) in 27 community colleges participating in the Achieving the Dream initiative. Kerrigan investigated the extent to which leadership, faculty support, institutional research, and information technology capacity positively influence the extent of 3DM. Importantly, Kerrigan found that only leadership was positively correlated with breadth and depth of 3DM. This is further evidence that advocacy by leadership in response to external challenges and opportunities, rather than incremental internal developments, is far more important to the development of systems and information that support decision-making.

Mayer (2011) investigated the relationship of Responsibility Center Management (RCM) to decision-making about discontinuing academic programs and restructuring academic units at three private universities that had discontinued or reorganized academic programs. One of the institutions studied employed RCM, one did not, and one used a hybrid combination. Mayer stated that “the path of growth and development for many American colleges and universities is to add new programs, majors, minors, departments, institutes, and centers to their academic portfolios,” the source of funding for which is “raising tuition rates and increasing non-tuition financial resources, including fundraising campaigns, endowments, and auxiliary services” (p. v). The author notes that institutions
rarely eliminate existing academic programs, resulting in a process that is additive in nature. The implicit recognition in this study, which reportedly gave rise to the research question, was whether constituents forced to more directly feel the impact of financial forces would be more willing to take action regarding the future of academic programs. Interestingly, Mayer found a strong sense of support for the information and tools provided by RCM. However, the research showed that even in the face of information that suggested the need for substantial changes, action was not taken. As concluded by Mayer, “Overall, in order to facilitate a meaningful decision-making process regarding the elimination or restructuring of academic programs, a cataclysmic event had to occur” (p. 152). This study is relatively recent, and has significant implications for decision-making, intentionality, the use of business intelligence, and institutional performance, relative to the proposed research.

Roig (1997) studied the relationships among decision-making style, environmental pressure, and use of information by departmental chairs. The author stated that the purpose of this research was to investigate decision-making styles and the amount of information by the participants under different environmental conditions. This research is pertinent to the current study because among the factors investigated by Roig were the amount of information, the time pressure involved in the decisions, and the level of routineness of the decisions. Roig found no differences in the use of information among the participants due to their decision-making style. Interestingly, the author also reported no differences in decision-making related to the environmental factors in the investigation.
The research conducted by Rowles (2003) was an interesting examination of the use of data in decision-making among senior administrators and faculty. Rowles’ study sought to identify factors that contribute to or detract from an institution's tendency to use data in decision making. The theoretical framework used by Rowles was the Garbage Can decision-making model advanced by Cohen, March, and Olsen (Cohen et al., 1972). The author sought evidence to show the extent to which the Garbage Can model was dominant in decision-making among the participants. The author reported that the model was a good fit for the decision-making employed by faculty in the study. Rowles also reported that faculty typically did not use information significantly in decision-making. The author reported for among senior administrators, decision-making did involve the use of information. Rowles commented that in this way, decision-making by these participants appeared to be evolving toward a more corporate model. Results also showed that characteristics of the office of institutional research (IR) were correlated with a campus' overall tendency to employ evidenced-based decision-making. Rowles reported that characteristics of IR offices that were correlated to more use of information in decision-making included staff size of the IR function, area of focus by the IR office, and the leadership exhibited by the IR director. This is relevant to the current research, as information provided by the directors of institutional research at the participating institutions is an area of investigation.
Chapter 3: Methodology

Introduction

As stated in Chapter 1, the purpose of this qualitative research study was to investigate and document decision-making by chief academic officers (CAOs) and chief financial officers (CFOs) at private liberal arts colleges. This included the investigation and documentation of contexts, constituents, processes, tools and techniques, and similar factors that holistically constitute the decision-making processes at these institutions. As Patton (2002) observes, “the themes, patterns, understandings, and insights that emerge from fieldwork and subsequent analysis are the fruit of qualitative inquiry” (p. 5). As Janesick (2000) states that the researcher must do more than interview the participants. The qualitative researcher must also interpret the beliefs and behaviors of participants. In the end, developing an account of the decision-making of CAOs and CFOs at private liberal arts colleges would not have been possible in the absence of the accounts provided by the participants that included beliefs, behaviors, values, fears, frustrations, and other factors that were personal and individual in nature.

Case Study Methods

I employed a multiple case study method for this research. Merriam (1998) defines case study as “an intensive, holistic, description and analysis of a single instance, phenomenon, or social unit” (p. 21). Merriam states that the inclusion of multiple cases is a common research strategy, and may increase the external validity and generalizability of the research findings. Case study research is widely used today, and is a common research method in psychology, sociology, political science, anthropology, social work, business, economics, education, nursing, and community planning. Yin (1994) reports
case studies are particularly suited for understanding complex social phenomena. He notes that when case study methods are used effectively, they allow researchers to preserve the holistic and meaningful characteristics of real-life events in the findings. Yin observes that among the phenomenon appropriate to the use of case study methods are investigations concerning small group behavior, as well as organizational and managerial processes. The study of how information is used in liberal arts colleges is indeed a complex phenomenon, appropriate for the case study method.

This study involves decision-making by senior institutional leaders. No a priori assumptions are made and no theories are being tested. Merriam (1998) states that the decision to use case study design is guided by the need for insight, discovery, and interpretation, rather than the testing of a hypothesis. My expectation entering this research was that decision-making would vary widely by institution, individual decision-maker, political context, and a host of other factors.

Merriam (1998) and Stake (1995) advocate for case study methods as a particularly effective approach in investigating processes. As Stake explains, case studies are useful in providing insights into how things “get to be the way they are” (p. 47). Yin (1994) states that case studies are the preferred method when “how” or “why” questions are being posed. Bartlett and Vavrus (2017) state that comparative case studies are effective for researching the impact of policy and practice. They also state that case studies may help develop information on events that occur across time. They note that a useful premise of this approach involves the concept of “policy as practice” as espoused by Shore and Wright (1997) and Levinson and Sutton (2001). Hamann and Rosen (2011) note that leaders involved in decision-making may differ in several ways. Among these
is a difference in authority concerning determining the identity and nature of the problem in question. A second way is in determining the way in which a problem might be solved. Third is determining how to go about solving the problem in both the short and longer terms. As previously noted, the decision-making context at private liberal arts colleges is highly complex and involves numerous contextual factors and sources of influence.

Yin (2014) notes that case study research actually involves questions at five levels:

- **Level 1:** Questions asked of participants during interviews.
- **Level 2:** Questions asked of within one case under study.
- **Level 3:** Questions asked of the results across multiple cases under study.
- **Level 4:** Questions asked of an entire subject under study, including the results of analysis across multiple cases as well as other information that may be sought to enhance the understanding and conclusions.
- **Level 5:** Questions asked about the relevance and applicability of the results concerning a phenomenon being investigated using case study methods.

Yin states that investigators should concentrate heavily on Level 2 questions for the case study protocol. He notes that the difference between Level 1 and Level 2 questions is important and should be clearly understood. According to Yin, investigators are commonly confused about these questions, and may think that the questions about the case are the same as the same as the questions they will ask of participants, but that they are actually very different. I approached this study with a focus on Level 2 questions, focusing on each case as an independent unit of analysis.
The primary approach employed in this research is that of a descriptive case study. Correspondingly, the primary result is intended to be a detailed account of decision-making in context by the participants. Merriam (1998) describes the product of such studies as “thick, rich description” that can serve as a database for future comparisons and theory building.

Merriam (1998) reports that interpretive case studies are different from descriptive case studies, and are often used to inform concepts and theories relating to the phenomenon under investigations. A descriptive case study is intended to produce a detailed account of the phenomenon under study. But utilizing a descriptive case study approach does not exclude the possibility of interpretive analysis if the findings support this step. Merriam notes that the investigator categorize or conceptualize different elements of the data in an approach that is inductive in nature. This study was intended to be primarily descriptive, but also provided for the possibility of interpretive analysis as a secondary goal if the results supported this step. In the end, I found that the descriptive phase of the research produced rich, descriptive results that enabled interpretive analysis. I therefore employed an analytical approach to support interpretive analysis as discussed below.

Stake (1981) observes that knowledge learned from case study research differs from that produced by other methods in four important ways:

- It is more concrete, more vivid, and resonates with our own experience
- It is more contextual, with the experiences of investigators and readers both rooted in context
- It is more developed by reader interpretation
To a greater extent, it is the reader who determines the generalizability of information concerning the reference populations.

The fact that no *a priori* assumptions were made and no hypotheses were tested proved important in this study. For example, it was not assumed that CAOs and CFOs were aware of or used information in their decision-making, or even that intentional decision-making incorporating goal-setting occurred. Further, the possibility that individuals could develop positive accounts to rationalize previously occurring negative actions or outcomes was recognized as a possibility. As Patton (2002) expresses this: “How have the people in this setting constructed reality? What are their reported perceptions, ‘truths,’ explanations, beliefs, and worldview?” (p.96). To have imposed filters concerning hypothesis-testing, or prior assumptions regarding both institutional context and the way that decision-making occurs, would have effectively blinded this study to some of the most important information gained as a result of the research. It was only through the open-ended, semi-structured questions that the rich, descriptive accounts provided by the participants were possible.

**Sampling and Study Population**

This study employed what is commonly termed purposive sampling as described by authors including Patton (2002), Teddlie and Tashakkori (2009), and Merriam (1998). Teddlie and Tashakkori (2009) note that purposive sampling strategy is most useful when seeking to generate a wealth of detail from a few cases, which is consistent with the purpose and opportunity of this study. The authors state that there are several characteristics for purposive sampling: the selected cases are “information rich” in regard to the research questions; allows focus on the “depth” of information that can be
generated by individual cases; instances can be sought that are representative of a typical case on a dimension of interest; and, it promotes comparability across different types of cases on a dimension of interest.

The state of New Jersey offered a population from which to select cases for this study. The colleges and universities in New Jersey are well identified, and governed by a common set of state laws and policies under the New Jersey Secretary of Education. As reported by that office, the New Jersey higher education system includes 31 public and 35 independent institutions, and enrolls over 440,000 full- and part-time credit-seeking students statewide. A preliminary analysis of the colleges and universities in New Jersey using information from multiple sources revealed eight institutions in the state that fall within the general category of liberal arts colleges. Six of these institutions are private.

During the background research concerning these private liberal arts institutions, I had collected basic information about all of these institutions. This research was conducted online using searches that were both targeted and open. For the targeted searches I sought information from the websites of the institutions, known databases including IPEDS, U.S. News rankings, and similar sources. For the open searches, I utilized a battery of search terms designed to uncover basic information about the institutions that might fall outside the targeted sources.

CAOs and CFOs at five of these institutions were contacted using the letter of introduction in Appendix A and invited to participate in the study. Before further communication from me to the CAOs and CFOs, one CFO contacted me and declined participation. As a result, the school was eliminated from participation. Four schools were ultimately selected for inclusion in the study with both the CAOs and CFOs at those
institutions agreeing to be participants and be interviewed. These four institutions all met
the descriptive parameters of private liberal arts institutions as defined in Chapter 1.

I had originally begun to develop separate profiles for the four institutions in this
study that simultaneously provided key characteristics while preserving the anonymity of
the institutions. However, it soon became apparent that there were very few
differentiating characteristics of the four institutions. In fact, the institutions are very
similar in nearly all ways. The only two factors where some difference existed were
religious affiliation and Carnegie class. With regard to religious affiliation, all of the
schools had historically been associated with religious denominations. But in only one
case was there currently anything beyond a nominal influence on the institution, and in
that case it did not rise to a substantial influence on the school’s operations, admissions,
budget and finances, or academic programs.

With regard to Carnegie classification, the four institutions fell into one of two
categories. Those were Baccalaureate Colleges: Arts & Sciences Focus, or Master's
Colleges & Universities: Medium Programs. While this differentiation is not
insignificant, it became clear that the institutions existed along a continuum in this
regard, and were closely clustered along the continuum. In fact, if I had been unaware of
this difference in classification it would not have been apparent through substantive
information gained through the interviews with senior officers or through the institutions’
online information. In sum, these institutions had far more in common than would have
been indicated from different Carnegie classifications.

All four institutions in this study are small or very small, private, not-for-profit,
primarily residential institutions located in New Jersey. All institutions are over 100
years old, and all have historically had a religious affiliation. With regard to undergraduate enrollment, all institutions in the study were consistent in being classified by Carnegie as Majority, High, or Very High Undergraduate Enrollment Profile. The enrollment of the institutions ranged in the general category of 1200 to 2500 students. The exact numbers are withheld to protect the identity of the schools. All institutions were found to have initiated or were on the way to initiating more adult and graduate programs.

Financially, all institutions were heavily tuition-dependent. The published tuition and fees vary considerably between the institutions. Acceptance rates for all four schools are above 50%. Endowments of the institutions varied considerably, but endowment was insufficient in all cases to enable anything other than being strongly enrollment and tuition-dependent. All institutions were later found to be struggling financially as revealed by the participants.

The four institutions in the study are all accredited by Middle States Association of Colleges and Schools. Finally, all institutions proclaim strong liberal arts foundations. At the same time, all institutions also described being well aware of the need to be career-minded insofar as students and prospective students were concerned.

Information Gathering and Participant Interviews

The qualitative instrument employed in this research was a set of semi-structured, open-ended questions in Appendix B. These questions were informed by a careful review of the literature, particularly concerning decision-making processes in general, as well as previous research from higher education specifically. I developed this instrument to explore the decision-making context and decision-making processes at the institutions
in this study. In total, these questions were designed to solicit responses from the CAO and CFO participants aimed at answering the five research questions in this research.

Patton (2002) describes this technique as utilizing an interview guide or a semi-structured interview and offers a number of strengths in this approach. Among them is that it structures information from multiple interviewees in such a way as to make responses easier to find and compare. Another strength is that it provides for the need to explore particular areas more fully as needed.

Approximately a week after mailing the introductory letters to the prospective participants at the schools, I contacted them by email in an effort to schedule the interviews. Seven of the participants readily accepted the interviews and they were scheduled with no significant issues. The remaining participant required several weeks of interactive emails in order to answer the questions and concerns of this individual before an interview could be scheduled. During this time, I provided considerable information about the study, its purpose, privacy and confidentiality provisions, my own identity and professional background, and other factors. In the end, the individual agreed to the interview and it was successfully scheduled.

During the background research concerning these institutions, I had collected basic information about the schools. Well in advance of the interviews with the CAOs and CFOs, I conducted extensive online research about the institutions as well as the participants. This research was largely open-ended in nature and was designed to go beyond the basic information readily available from known sources as discussed previously. My professional experience includes substantial previous work in online research, which I utilized in these searches. This was intended to obtain much more
comprehensive and in-depth information to inform the interviews. In the end, a significant volume of information assets was obtained on the backgrounds of the participating CAOs and CFOs, institutional officers, institutional histories, intra-institutional communications, and various others.

As previously discussed, a fundamental characteristic of information is that it may exist in either a structured, quantitative form, or in an unstructured, qualitative form (Rao, 2003; Negash, 2004; Baars & Kemper, 2008). Patton (2002) notes that various forms of unstructured information can be very important in qualitative research. As he notes, these are called “material culture” in anthropological terms, and they constitute a “particularly rich source of information” (p. 293). In this study, such forms of information constituted a secondary form or evidence outside the participant interviews. The types of information artifacts were intentionally broad, and included documents, web pages, news reports, and other entities of a similar nature that were available via the internet. In this research, these forms of information are termed information artifacts.

Some of the more important aspects of such information observed by Patton (2002) proved particularly important in this study. For example, the author states that such artifacts may well represent things that cannot be observed by the researcher. They may also reveal information about things that occurred before the research begins, for example that predated interview questions. Patton states that this can help the researcher understand how various elements such as programs and processes came into being. This realization proved significant in the course of this research. While some might be tempted to extend the decision-making processes documented at the four institutions in this study to reflect decision-making processes at private liberal arts institutions
generally, such extension would be misplaced and done in error. The contexts of these institutions were ultimately found to differ in important ways.

The interviews with the CAOs and CFOs in this study provide only a synchronic picture, not a diachronic view. That is, the answers provided by the participants reflected their knowledge and experience of their respective institutions during a relative brief period in most cases. As many of the participants were relatively new to their institutions, their direct knowledge and experience was three years or less. A more diachronic view would have resulted if the time periods had been longer and reflected knowledge and experience over a longer period of years.

This is an important point as these institutions were undergoing substantive changes, including changes in senior leadership. Therefore as noted by Patton (2002), information that helped construct an understanding of the paths these institutions took previously to arrive at their current situations was very important. The senior leaders at these institutions were engaged in decision-making processes within a specific context. As a result, interviews alone, particularly ones that did not incorporate a contextual view, would have proven inadequate except to provide an account of decision-making ‘in the moment.’ Case studies, particularly dealing with individuals and organizations undergoing change, must take context including previous events into account. As Stake explains, case studies can prove most useful when providing insights into how things “get to be the way they are” (p. 47).

Patton (2002) also notes that unstructured information can point to new paths of inquiry that can be pursued through interviewing and observation. As he states:
Multiple sources of information are sought and used because no single source of information can be trusted to provide a comprehensive perspective on the program. By using a combination of observations, interviewing, and document analysis, the fieldworker is able to use different data sources to validate and cross-check findings. (p. 306)

The research and information gathering I conducted concerning these institutions proved valuable with respect to key events and characteristics that were subsequently incorporated into the interviews. To be clear, the interviews were not determined by this information, but the context this information provided made the interviews much more effective than would otherwise have been the case. There are multiple examples in this regard that included news accounts, open letters from presidents, institutional web pages, and numerous others. This information pointed to key elements specific to individual institutions that included student retention issues, financial circumstances, changes in *U.S. News* rankings, expanded academic programs, and others. These were introduced into the interviews at appropriate points for more in-depth exploration with the senior leaders.

From the information artifacts collected through this research, I then prepared a briefing packet for each of the institutions and corresponding participants. Prior to each of the interviews, I reviewed these materials in detail to ensure that I was familiar with the participant, the institution, and special circumstances relevant to each of the cases.

I conducted in-person interviews with these senior officers between March 13, 2017 and April 17, 2017. All interviews were conducted on the campuses of the schools, and in the offices of the participants or a conference room adjacent to their offices, at
their discretion. All but one of the participants agreed to digital recording of the interview. Only one participant, CAO3, declined to be recorded. As a result, the responses of that interview were recorded by handwriting during the interview. In total, digital recordings of the seven CAO and CFO interviews totaled 8 hours and 35 minutes.

The semi-structured, open-ended questions proved to be effective instruments during the interviews. In a positive way, most of the participants actually used the semi-structured questions as an opportunity to discuss the topics underlying the questions at some length. This meant that the responses were less structured than the discrete answers to the individual questions would have produced. But this small downside was more than offset by the breadth of the information provided by these senior leaders. As a result, I chose not to impose an interview style that would have forced a linear, sequential progression through the questions. Instead, I ultimately used the questions essentially as an inventory of the topics to be fully covered during the interviews. While this required that I keep track of the important issues interactively during the interviews, the benefit was that the interviews were more open, interactive, and conversational. It afforded the opportunity for follow-up questions to more deeply explore important elements, as well as providing a natural segue into related areas of inquiry identified previously in the questions.

With regard to the individuals participating in the study, I found the majority of the CAOs and CFOs to be remarkable in two ways. First was the dedication, passion, and determination relative to helping their institutions survive that they displayed. Second was their willingness to not only participate in this study, but to be open and forthcoming with the information they provided. As one of the CFOs expressed during
preliminary introductions before the interview, “Who wouldn’t want to participant in a study like this?” Though two of the participants were somewhat reserved, and one of those had to be convinced of both the confidentiality of the information and that it would not be provided to any agencies or organizations to “set policy,” once the interviews were underway I was quite surprised by the thoughtfulness and openness of the conversations.

One characteristic revealed in this study involved the level of recent change among the senior leaders of the participating institutions. While this might be expected given the daunting challenges facing the schools, it ultimately became apparent that in some if not all cases this was a response mechanism by the institutions to confronting the challenges they were facing. I also found that most of those CAOs and CFOs who were relatively new to these schools had actually decided to come to these institutions specifically to help them in their struggle to survive. In addition, particularly in the case of CAOs, a significant component of their decisions was to help their selected institutions survive because of their expressed desire to preserve the continued offering of liberal arts-based educational opportunities.

Indeed, the passion of all but one of the participants in their respective roles became clear in the richness of the information they provided and the manner in which they spoke during the interviews. The individual who was an outlier in this regard was a CFO who had been in their position for a number of years. One CAO was reserved in their comments generally, and simultaneously demonstrated a desire to put the most positive face on even the most serious of challenges. I would also note that I detected in
this individual a conflict in priorities concerning their institution’s survival versus their own professional survival.

Several of the participants related that they had accepted their current positions specifically for what could well be termed dedication to a purpose, and several stated they had actually taken pay cuts to do so. However, I should note that in all but one case this was also coupled with a determination that their respective institutions would ultimately survive and that they would do whatever necessary to ensure that. In no case did the participants express the sense that they had joined a lost cause; quite the contrary. And, as CAO4 described the situation with unintentional irony, “I’m relying on the education that I’m selling to try to make this place survive in a world that’s very frightening. And not just my institution, but… as I look in this field, 25 years from now, personally I won’t be in it anymore. But it’s gonna look radically different.”

**Interview Recording and Participant Confidentiality**

In order to gain the most complete understanding possible of the decision-making process at the institutions under study, the participants were asked to share information that could well be considered sensitive and restricted. In several cases, they were asked to comment or expand upon information that was already within the public domain, but which was clearly sensitive in nature. To a great extent, the CAOs and CFOs in this study supplied information that was quite personal and confidential. If shared inappropriately, such sensitive information could be harmful to the participants such as causing damage to working and personal relationships, and even careers. As a result, the participants were advised of the privacy and confidentiality of the information they were
providing. They were all asked to sign a research participation agreement, and all agreed to do so. They were provided with a copy of that form for their records.

All information provided by these individuals is being held in strict confidence, including both audio recordings, emails, and interview notes. All four institutions were given code names as described in Chapter 4. Participants were also given code names, and their identities protected by not providing their names or genders, their specific times in their positions or at their institutions, or the identities of their institutions. I personally transcribed all digital recordings of the interviews. They were all secured on my private computer and storage system by password and multi-factor authentication.

The interviews were all conducted behind closed doors, and only the participant and myself were present during the interviews. In no case was their discussion with any participant of the other schools in the study, or other members of their own institutions participating in the study. When asked, I responded that I was not at liberty to discuss this, consistent with the privacy and confidentiality afforded all participants.

Data Analysis

In total, digital recordings of the seven CAO and CFO interviews totaled 8 hours and 35 minutes. I transcribed the results personally. Dragon Naturally Speaking software was utilized for initial voice recognition processing, however the accuracy was only approximately 50%. I then utilized Express Scribe Transcription Software Pro, combined with Andrea Anti-Noise USB headphones and an Infinity USB Digital Foot Control to complete the transcription process by transcribing the entire audio files for accuracy. This proved very helpful, as in addition to enabling near 100% accuracy, it also resulted in my becoming even more immersed in the results of the interviews with
each incremental pass through the audio recordings. In addition, it provided the benefit of listening even more closely to the inflection and similar auditory clues in the interviews with each subsequent pass, enabling a richer contextual interpretation of the responses by isolating the verbal audio. In total, 152 single-spaced pages of transcription were produced from the interviews. I should also note that I intentionally retained the actual words, including slang expressions, to retain the most accurate reflection possible of the participants’ responses.

As noted by Johnson, Dunlap, and Benoit (2010), qualitative research inevitably creates data that initially starts as “mountains of words.” This was certainly the case in this research, as the interviews with the four CAOs and four CFOs in the study generated 152 transcribed and edited single-spaced pages of results totaling 66,490 words.

The CAOs and CFOs referenced in the results below are designated by their institution. For example, CAO1 is the CAO from Institution-1, and CFO4 is the CFO from Institution-4. In addition, one of the ways employed to help ensure confidentiality for the institutions and the participants involved eliminating any reference to gender, as well as specific timeframes in their respective positions, and notations concerning job titles. Categories are referenced that include a range of years in some cases, as opposed to listing the specific time an individual has been in their current job. Participants are referred to throughout the results with the gender-neutral pronoun of “they” in most cases, and at other times as “the participant.” As necessary when taking identity-specific references out of quotes, square brackets are used to indicate the substitution. For example, the hypothetical name of Jack would be replaced by [They].
In addition to the CAOs and CFOs at the four institutions, the directors of institutional research (DIRs) at the schools were also interviewed. One of the interviews was conducted on the DIR’s campus in person, and three were conducted by phone. All interviews with DIRs were conducted at the conclusion of the interviews with all CAOs and CFOs. The DIR interviews provided a source of additional information, as well as another point of triangulation. However, little new information resulted from the interviews with the DIRs. In no case with the DIRs did information surface that contradicted the information already obtained through the interviews with CAOs and CFOs. Nevertheless, summaries of the interviews with DIRs from the four institutions are provided in Chapter 4. In only one case involving Institution-3 was there any significant issue surrounding Institutional Research, and this resulted from divergent information related by the CAO and CFO in their interviews. This is discussed in Chapter 4.

In qualitative research such as this, the transcriptions of the interviews are analyzed in an effort to explore and explain phenomena in question. As Patton (2002), notes, guidelines for analyzing qualitative data are in abundance. However, as he further notes: “But guidelines, procedural suggestions, and exemplars are not rules. Applying guidelines requires judgment and creativity. Because each qualitative study is unique, the analytical approach used will be unique.” (p. 433) Fortunately, methods exist to help guide the process from words to meaning. The data in this study was analyzed consistent with qualitative methods and enhanced by within-method triangulation, as discussed below.
As noted by Walker and Myrick (2006), the analysis of data in qualitative research deals with words, language, and the meanings these imply. The challenge is in dealing with large amounts of data as texts that may have multiple meanings at both the individual and social levels, with the result being “themes or essences” (p. 549).

**Descriptive data analysis.** As discussed above, the primary goal of this study was as a descriptive case study for the purpose of investigating and documenting the decision-making context and processes of the CAOs and CFOs at the four institutions in this study. In support of this goal, Chapter 4 includes summaries of the institutions, as well as summaries of the interviews with all CAO and CFO participants in this study. However, a secondary goal was interpretive analysis of the results as described by Merriam (1998) if the results supported this step. Fortunately, in this study that was the case and an interpretive analysis was performed as well. Both the descriptive analysis and the interpretive analysis are discussed below.

This process developed for use in data analysis in this study was informed by the work of Strauss and Corbin (1990; 1998) as well as Creswell and Plano Clark (2007). Patton (2002) observes that the purpose of such analysis is to move from lower level concepts to higher level theorizing. Theorizing, as defined by Strauss and Corbin (1998), is “conceiving or intuiting ideas –concepts—then also formulating them into a logical, systematic, and explanatory theme” (p. 490).

I utilized a five-stage process for data analysis in this study that was based largely on the approach advocated by Creswell and Plano Clark (2007). The process advocated by Creswell and Plano Clark (2007) for analyzing the results of each participant interview appears below in Figure 1.
Stage 1 is often referred to as preparing the data for analysis. It involves organizing any information assets that may have been used, transcribing recordings and notes into text, and preparing text for further analysis. This phase began during the interviews themselves, and proceeded through transcription of the interviews as well as iterative reading and rereading of the full transcripts. In this way, I not only prepared the
152 pages of interview results for use through transcription, but also became increasingly immersed in the data. At this point of the process, I began to develop very preliminary categories, dimensions, and relationships within and between the interviews. I also made notes and recorded memos referencing preliminary observations and understandings of the text data, as referenced by Creswell and Plano Clark (2007). In the end, the data had been prepared for further analysis and I had gained deeper familiarity with the participant interviews.

Stage 2 of data analysis is sometimes called microanalysis in the literature, which Strauss and Corbin (1998) have defined as a line-by-line analysis employed to generate initial categories including properties, dimensions, and relationships. Miles et al. (2013) define this as data condensation. During the second stage of the analysis, I identified key words and phrases in the resulting full text of each of the participant interviews. Ryan and Bernard (2003) describe an approach they call key-words-in-context, or KWIC, that begins with identifying the most important elements with the entire corpus of text.

The key words and phrases were highlighted in each text file utilizing more advanced features of Microsoft Word that I had identified and optimized in advance for this purpose. From the original full text files of each interview, I extracted out only the key words and phrases that had been identified and highlighted. I then saved each of these reduced files containing only the key data elements. In this way, the second stage of the analysis process resulted in transforming the full interviews into abstract files for each participant in a way that made the results simpler and more manageable as described by Miles et al. (2013). I also performed counts of the occurrences of key words and phrases during this phase of the analysis, which were recorded within each participant
In Stage 3 of the analysis, I began to apply the preliminary categories, concepts, and relationships I had been developing to the key words and phrases in the data abstract files through open coding of the data as described by Strauss and Corbin (1998). Glaser (1978) states that it is in this stage that emergent properties and categories begin to appear. The open codes I applied in this phase of the analysis were tested by assessing their effectiveness and fit, reflexively going back to the full interviews and determining how well the coding fit with the overall messages conveyed by the participants during the original interviews. In doing so, I asked questions including whether these were indeed the key categories and concepts expressed by the participants, if there were key relationships within these elements, and the categories and groupings reflected overarching messages I had understood from the participant interviews and information artifacts preceding the interviews.

In this stage, I recorded more notes, observations, and tentative themes as the process moved forward incrementally. As part of this, I also employed the technique advocated by Ryan and Bernard (2003) in checking the codes against the full text of the interviews for overall fit. Among the categories developed in this phase of the analysis were Institutional Tensions and Change, Participant Tensions and Conflicts, Relationship Between the CAO / CFO, Participant Leadership Style / Decision-Making, Financial / Academic Response, and Use of Information in Decision-Making, among others.
As part of the Stage 3 analysis, I developed a series of matrices containing the categories and participants by institution, as well as the categories developed through the thematic analysis. For example, a matrix was prepared for the category of Institutional Tensions and Change as a way of bringing together the individual participant data within this category for comparing and contrasting the results. Creswell and Plano Clark (2007) state that it is at this point of the process that the investigator begins developing and interrelating themes. I designed and configured this instrument in such a way that it enabled incremental manipulation of the results by participant, CAO / CFO position type, and institution as the iterative process of identifying and testing themes progressed. Categories were developed, tested, modified, and retested incrementally in order to develop and refine the main themes emerging from the results.

Eisner (1998) defines themes as the recurring messages that pervade the situation, and the dominant features of the situation or person under study. As Eisner observes, themes are the pervasive qualities that “tend to permeate and unify” the results about a phenomenon being studied (p. 104). The subject of thematic analysis is one of the most important elements of this research. Teddlie and Tashakkori (2009) state that themes are the dominant features or characteristics of a phenomenon across all of the qualitative data analysis. Boyatzis (1998) likens thematic analysis to a way of “seeing.” As the author notes: “Observation precedes understanding. Recognizing an important moment (seeing) precedes encoding it (seeing it as something), which in turn precedes interpretation” (p. 1). A main focus of the analysis of the data from this study was ultimately the search for emerging themes concerning decision-making within particular institutions, and also within the categories of the senior leaders (i.e. CAO, CFO).
Stage 4 of the data analysis is called representing the data analysis by Creswell and Plano Clark (2007). The work continues in taking the data that has been broken down, and putting it back together in new ways dimensionally by categories and subcategories according to the properties and relationships observed in the data. The goal of this stage of the analysis is finding the best fit of the data elements and emerging themes, and portraying them in such a way that the reader is able to see the phenomenon and the interpretation offered by the investigator. One measure for the success of this stage of the data analysis is offered by Creswell and Plano Clark: Does the discussion of the results convince the reader that the suggested theme or category emerges from the data?

During this phase of the analysis, I performed a summarization of the interviews of each participant within the structure that had emerged from Stage 3 of the analysis. That is, the main categories that had emerged were used as a standard structure for each participant summary. The headings used in the summaries matched the top level categories identified through the preceding stages of analysis and included: Institutional Tensions and Change; Academic Response or Financial Response, according to participant position type; Leadership Style / Decision-Making; Relationship with the CFO or CAO, according to participant position type; and, Use of Information in Decision-Making. The main themes expressed by each of the participants within each category, as well as direct quotes from each participant, was then used in constructing summaries of the interviews that focused on the main messages expressed by each participant within each of the categories above. The summaries are presented in Chapter 4.
Stage 5 of the data analysis focused on further validating the data through the techniques discussed by Creswell and Plano Clark (2007). I would note that every effort had been made at this point of the study to ensure that sound methods had been employed to accurately record and transcribe the interviews, as well as analyze, reduce, categorize, and develop themes from the interview results. For example, as discussed below a form of member checking was pursued as a component of the interview process itself. This proved useful in helping ensure that I was accurately understanding and synthesizing the messages conveyed by the participants during the interviews. As a result, Stage 5 of the data analysis represents additional validation of the data through within-case and cross-case analysis. As noted by Creswell and Plano Clark, triangulation is an important component of data validation. Triangulation was discussed in detail above, and the application of this technique in this study is discussed more fully in the following.

**Interpretive data analysis.** As previously noted, the information gained from the CAOs and CFOs in this study produced “thick, rich description” as noted by Merriam (1998) that can serve as a database for future comparisons and theory building. This satisfied the primary goal of this research as a descriptive case study.

The results from the descriptive component of this study also enabled interpretive analysis as discussed by Merriam (1998). As Stake explains, case studies are useful in providing insights into how things “get to be the way they are” (p. 47). Yin (1994) states that case studies are the preferred method when “how” or “why” questions are being posed. Multi-case studies are particularly useful in this regard as previously discussed. These questions are consistent with the purpose of interpretive analysis in seeking to document the phenomenon under study, but also to understand it. As stated by Miles et
al. (2013), “Qualitative data are not so much about behavior as they are about actions which carry with them intentions and meanings and lead to consequences” (p. 11). Merriam (1998) states that the goal of interpretive research is “understanding the meaning of the process or experience” under study (p. 4).

Yin (2014) notes that case study research involves questions at five levels. Levels 1 and 2 deal with the findings involving individual cases. However, Levels 3 and 4 deal with the pattern of findings across multiple cases, and with the questions asked of an entire study including findings beyond the case study evidence and including other literature as well. In the interpretive analysis component of this study, I utilized results from the four cases to develop conceptual categories and to illustrate themes and explanations across these four private liberal arts colleges as described by Merriam (1998).

As noted above, I developed instruments during the descriptive data analysis that would facilitate comparison of the themes by category across the multiple cases in this study. An example of this involving cross-case analysis of the themes under the category institutional tensions and change appears in Appendix D.

In this study, triangulation of the results from the five-stage data analysis was conducted in multiple ways, both within cases and across cases. These included triangulation of the results of each participant interview with the information artifacts produced by the targeted and open-ended research, triangulation within the CAO and CFO at each institution, triangulation within the CAOs and CFOs groups respectively, and triangulation across the four institutions. This is consistent with Yin’s (2014) suggestion that case study methodology is particularly helpful in questions involving
“how” and “why” things happen. It is corresponds to his Level 3, 4, and 5 questions that deal with results across and beyond multiple cases. The results of this interpretive analysis including convergence, divergence / dissonance, and complementarity of themes are discussed in Chapter 4 and Chapter 5 below. In particular, Chapter 5 includes categories, themes, interpretations, and preliminary theories developed as explanations for the patterns seen across the participants and institutions in this study. The process utilized is represented in Diagram 2 below.

Figure 2 Cross-Case Analysis
**Triangulation.** As noted above, one of the techniques commonly utilized in social research is triangulation. Merriam (1998), Stake (1994), and Yin (2014) all note the value of triangulation in case study research. Interpretive analysis of answers to the structured questions and follow-up questions from the interviews with the CAOs, CFOs, and DIRs were used in two distinct ways: revealing themes and patterns both within and across cases, and checking for consistency within the information provided and among the sources providing the information.

In this study, within method data triangulation was used for analysis of responses from the three participants at each institution, as well as the information artifacts collected during the research. At a higher level, it was also be used to analyze data across the four institutions in this study.

A number of authors have suggested that convergence as an aim of triangulation is misplaced because it assumes there is a single reality to be discovered and explained. Mathison (1988) discusses the usefulness of triangulation in revealing information that may be inconsistent or even contradictory, and stated that a unique power of triangulation is in providing a holistic understanding of the subject in question, and in helping to construct plausible explanations about the phenomena being studied. Erzerberger & Prein (1997) state that triangulation is actually more precise when its aim is to reveal complementarity, convergence and dissonance among the findings. As discussed by Patton (2002), it is consistent with an understanding of constructed reality that each participant simply interprets and relays a common reality in different ways.

**Ensuring research quality.** As noted by many authors (see e.g. Ali & Yusof, 2011), the overarching issue of research quality in qualitative studies has been widely
discussed yet remains a nebulous concept characterized by an array of disparate views. Terms such as validity, reliability, trustworthiness, generalizability, and many others are employed. As noted by Creswell and Miller (2000), “readers are treated to a confusing array of terms for validity, including authenticity, goodness, verisimilitude, adequacy, trustworthiness, plausibility, validity, validation, and credibility” (p. 124). The authors further note the diverse typologies constructed by various authors along these lines. In the end, a far more practical goal is that expressed by Ederle (2005) who observes that, “we need to define criteria by which we can distinguish “good” from “bad” qualitative research, be it “validity” and “reliability” or other concepts like “consistency” or “adequacy of meaning” or even others” (p. 5-6).

In the end, and in answering the question of whether the interpretive analysis phase of this research is ultimately “good” research, the test begins with fundamental questions as noted earlier: 1) whether the account provided by the researcher and as obtained from the participants is accurate, can be trusted, and is credible (Lincoln & Guba, 1985); and, 2) does the discussion of the results convince the reader that the suggested theme or category emerges from the data (Creswell & Plano Clark, 2007). Carlson (2010) states that one means of demonstrating trust is to present the results in such a way that it becomes clear the data was collected ethnically, and that it was appropriately analyzed and reported. Full documentation of the research procedure including participant interviews was provided earlier to help establish that the results were obtained ethnically and following established procedures. As well, the process for data analysis and triangulation was documented to help ensure that the recording,
analysis, and reporting of the results was appropriate and consistent with established procedures.

Inference quality generally refers to the quality of the conclusions that are made on the basis of research findings. In the interpretive portion of this study, I endeavored to create meaning out of the data collected in this research through an established process of integration and synthesis advocated by authors including Strauss and Corbin (1998) and Creswell and Plano Clark (2007). It was my intention to conduct this research in the most effective manner possible so that the themes were identified and explained in a way that supports inference quality to the fullest extent possible, and so that the conclusions might be useful within the higher education community.

One technique that I considered at length but elected not to employ in this research was member checking. Member checking is commonly viewed as a technique for establishing or enhancing the validity of an account provided by a subject (Barbour, 2001; Byrne, 2001; Coffey & Atkinson, 1996; Doyle, 2007; Lincoln & Guba, 1985; Creswell & Miller, 2000). A number of authors have offered criticisms and cautions concerning member checking as a way of establishing validity (Morse, 1994; Angen, 2000; Sandelowski, 1993; Krefting, 1991; Goldblatt et al., 2011; Koelsch, 2013). Among the criticisms is that member checking assumes that there is a single truth or reality the researcher can discover, and which the subject can confirm. Member checking may also lead to confusion rather than confirmation if a participant should change their mind the comments they made. Upon reflection a participant seeks to change or withdraw their previous comments. Respondents may disagree with the way the researcher interprets
their comments, which raises the question of whether the respondent’s comments or the researcher's account and interpretation should be used.

In the end, I utilized two methods to help ensure credibility. First, as suggested by May (1989), member checking was pursued as a component of the interview process itself. The techniques in this regard included an intentionally casual way of reframing questions, as well as restating answers and asking for verification that what I had understood was correct. I asked questions that were generally very consistent with those suggested by Carson (2010): “Am I on the right track?” “Did I understand this in the same way you meant it?” (p. 1105).

The second specific way that I pursued credibility in this study was consistent with the technique suggested by Tashakkori and Teddlie (2008), which they describe as ensuring trustworthiness through triangulation of sources. In this study, the CAOs and CFOs were asked the same battery of semi-structured, open-ended questions. Their answers were compared using the technique of triangulation to check for convergence, divergence / dissonance, and complementarity. Creswell and Plano Clark (2007) specifically mention utilizing the accounts of different individuals as a way of enhancing validity.

Ultimately, the interviews with the participants led me to the conclusion that my decision not to pursue the more traditional method of member checking was the correct one. The participants were genuine, open, and forthcoming with information to a degree that in some cases was both surprising and affirming. This was done under an assurance of confidentiality, and during the introduction and interview I sought to make the participant comfortable with the conversation. As a result, the words, descriptions, ideas,
emotions and other elements of the interviews were, in some cases, remarkable. I would like to believe that in all cases the participants, upon hearing or reading an account of their responses to the questions, would have been to affirm that the accounts were correct and that they had no objection to them being used in the study results. However, if this had not been the case it would have created an ethical dilemma of the nature discussed above. As a result of using the within-interview form of member-checking advocated by May (1989) and Carson (2010), this situation was avoided and the original responses of the participants were preserved.

Similarly, the use of triangulation suggested by Tashakkori and Teddlie (2008) as a means of ensuring trustworthiness, and by Creswell and Plano Clark (2007) as a way of enhancing validity, proved an effective strategy. Diagram 2 below shows the within-case triangulation approach used in this study.
As described in the results in Chapter 4, the results of interviews with CAOs and CFOs at two of the institutions displayed substantial convergence at all levels of triangulation. However, the results of interviews with the CAOs and CFOs at two of the institutions displayed more dissonance / divergence. The results will show that the accounts of all participants were provided as expressed in the interview summaries in Chapter 4. The dissonance / divergence in the accounts of the CAOs and CFOs in the two cases referenced was explored, and the results of the triangulation analysis provided as well.
Chapter 4: Findings

Setting and Context

Four schools were ultimately selected for inclusion in the study with both the CAOs and CFOs at those institutions agreeing to be interviewed. In total, 152 single-spaced pages of transcription were produced from the interviews. I should also note that I intentionally retained the actual words, including slang expressions, to retain the most accurate reflection of the participants’ responses. Summaries of the interviews were prepared from each full interview with the eight CAOs / CFOs to illustrate the main points expressed by the participants. The summaries of the interviews with the CAOs and CFOs from the four institutions are provided in the following sections.

As noted in Chapter 3, the CAOs and CFOs referenced in the results below are designated by their institution. For example, CAO1 is the CAO from Institution-1, and CFO4 is the CFO from Institution-4. In addition, one of the ways employed to help ensure confidentiality for the institutions and the participants involves eliminating any reference to gender, as well as specific timeframes in their respective positions, and notations concerning job titles. Categories are referenced that include a range of years in some cases, as opposed to listing the specific time an individual has been in their current job. Participants are referred to throughout the results with the gender-neutral pronoun of “they” in most cases, and at other times as “the participant.” As necessary when taking identity-specific references out of quotes, square brackets are used to indicate the substitution. For example, the hypothetical name of Jack would be replaced by [They].

In addition to the CAOs and CFOs at the four institutions, the directors of institutional research (DIRs) at the schools were also interviewed. One of the interviews
was conducted on the DIR’s campus in person, and three were conducted by phone. All
interviews with DIRs were conducted at the conclusion of the interviews with all CAOs
and CFOs. The DIR interviews provided a rich source of additional information, as well
as another point of triangulation.

Chapter 4 is organized into summaries of the participants by institution. In this
way, the CAO, CFO, and DIR of Institution-1 are provided in this order. In turn, the
summaries of interviews from the four institutions are below. Within the summaries of
the CAOs and CFOs are headings for the information from the interviews in the
following categories: Institutional Tensions and Change, Academic or Financial
Response according to participant position, Leadership Style / Decision-Making,
Relationship with the CAO or CFO according to position type, and Use of Information in
Decision-Making. Data analysis revealed these to be the most appropriate categories for
the information provided by the participants across the cases in this study.

Summaries of Interviews

Institution-1: Chief Academic Officer (designated CAO1). The chief
academic officer of Institution-1 (CAO1) had been in the position for a limited time
(category 0-2 years), but had a clear understanding of the institution and its mission that
closely matched the published information from the website as well as other sources.

Institutional tensions and change. CAO1 revealed that the institution has a
number of growing professional programs, but as the participant noted, “the institution
has changed, but liberal arts at its core, always.” Institution-1 was reported to be
regularly revisiting the mission, “for the purpose of making decisions that are going to
keep us, if you will, on track.” With regard to composition of programs and as related to
a liberal arts mission, CAO1 described the institution as trying to strike that balance between “the liberal arts essence of who we are, and the professional programs that we are strengthening and developing.”

CAO1 reported that with regard to key changes or outcomes in preceding years, the current institutional strategic plan is ending and a new strategic planning process is currently underway. The current strategic planning process was described as being both innovative as well as highly inclusive concerning the campus community, with numerous groups working on various components of the plan. A key aspect of this process, which was noted to be in the “front and center in people’s minds,” was a discussion of what the strategic vision of the institution will be moving forward.

The participant stated that enrollment at the institution was doing well, with a current entering class above what had been projected. Retention was also described as doing well and having recently improved. This was described as beneficial both academically and financially, and was linked to the need to reallocate resources, particularly to academics. Because “we’re bringing in more students and we’re keeping more students.” The completion rate of students was similarly described as being in a good place. CAO1 noted that while the institution still faces challenges, “we’re doing something right.”

The participant summarized their perspective of the current state of the institution as, “a mixed bag” because although they believed the institution was doing well academically, “our financials are… not where we need them to be nor where we want them to be.” CAO1 then added, “we have other indicators that suggest health.”
A number of tensions and conflicts at Institution-1 emerged from the interview with the CAO. One of the most important was related to be that of adhering to a liberal arts academic program for undergraduates in the face of a strong societal focus on education as the path to a good job and a successful career. As CAO1 stated, there is a “big disconnect” in the “perception of the students and the parents in terms of the value that the liberal arts education provides,” and that increasingly students and parents were questioning the value of a liberal arts education. They went on to describe the way that parents and students are “wanting to know, what am I going to be able to do with this when I’m done?” Moreover, the CAO reported that when the core curriculum had been revisited a few years ago, there was discussion about the need for some components of the traditional program even among faculty. “Even amongst and within the faculty there was some discussion about the need for a literature course.”

The CAO described the liberal arts mission as significant with regard to the programs that were offered by the institution, as well as the efforts needed to recruit prospective parents and students to Institution-1 insofar as a liberal arts education was concerned. The individual reported that most prospective students and their families were far more oriented around professional studies. “The value of a liberal arts education has to be reiterated, it has to be reinforced for them.” To help address this tension, the CAO described the efforts made to convey the value of a liberal arts education in broadening knowledge, building communication skills, and developing critical thinking skills. This required constant reaffirmation, as well as “trying to provide some kind of data or statistics that show the value of that liberal arts education.”
The CAO also discussed two other tensions that they were dealing with. One was the nature and level of change the institution was confronting as it sought to move ahead and adapt to the challenges it was facing. In navigating the institutional challenges, the individual described in substantive terms the necessity of supporting shared governance while simultaneously defining its role within the institution, as well as setting realistic goals and being transparent in information and decision-making. The CAO described the importance of “making sure that people have access to all of the data that they need to be able to conduct their own evaluation, follow along, appreciate what is or is not being considered.” When CAO1 was asked if they thought the faculty would respond well, they answered, “I think faculty are going to, depending on how they are engaged in the process.” When I asked how they thought the board would respond, the answer was: “We have a board comprised of a number of people who come from the business world. I think for them it is only smart and sound to approach higher education the same way you’d approach a business.”

At the same time that Institution-1 was working to successfully confront the challenges facing the school, CAO1 reported that the institution was even more fundamentally working to establish the mechanisms by which to do so. The way that things have been done have been “historically, in many areas much less formal than they may have been done at other institutions.” Previously, the culture at the institution by which decisions had been made involved “a lot of trust and faith put in relationships” as well as “a lot of trust and faith put in the history and tradition and the way things have always been done.” There was much less emphasis on policy and procedure, and now “we have some work to do in formalizing how decisions are made.” This in itself was
proving to be a significant challenge as related by the CAO, as a shift away from that legacy was described as anxiety-producing because it suggests more bureaucracy and more imposition and more structure. As CAO1 describe it:

We’re kind of grappling with striking that right balance between not becoming such a bureaucracy for such a small institution, allowing ourselves to keep making decisions, and keep the person kind of in mind when we’re making those decisions.

Many of the challenges confronting Institution-1 were described by the participant as involving the intersection of finances and academics. CAO1 stated that concerning decision-making at Institution-1, it was “the financial piece that I think has been a big miss for us.” When the CAO was asked about the engagement and collaboration with the CFO as their counterpart in the decision-making in this area, the story was not altogether a positive one. The CAO began by noting her belief that the CFO had been given decision-making authority. The observation of the CAO was that the CFO at Institution-1 had approached matters involving resource allocation in a less than collaborative and consultative manner, at least concerning the office of the CAO. The individual further observed that involving key issues, the CFO had “really directly communicated or collaborated with the president.” When asked if they thought the situation was that the CFO makes decisions and gives out money personally in a personality-based structure, they answered, “Yes. That sort of sums it up very nicely.”

CAO1 stated that among the limitations regarding decision-making at Institution-1 was the availability of data in which there was confidence. This was said to be the case in academic affairs, but significant steps had been taken to improve the situation there.
The CAO believed the lack of good data to support decision-making in the financial area was much worse. When asked their perception of the financial decisions that had previously been made at the school, the answer was that, “It did not make sense.” The individual continued, stating that: “It isn’t entirely clear why decisions were made, especially in terms of allocation. Very few of them I’ve looked at said, ‘that really makes sense to me.’” When asked about the use of data that the individual believed was used to make financial decisions, the response was that data existed in some cases, but in some cases there is a complete lack of data. In other cases, there is just a complete lack of data-driven decision-making. “I think that the message that’s communicated is [financial] decisions are being made based on data. But I think the reality is that the data that’s being used to make those decisions is extremely limited.”

The CAO described the way the role of the institutional researcher at the institution had changed significantly over the past year and a half. A new director of institutional research was appointed in that time, who was described as being a solid researcher. The participant also noted that the information provided by the DIR is a “healthy mix” of both structured and unstructured information, and that the DIR “gets the need for both the quantitative and the qualitative piece.” The amount of data that is being requested to help make better informed decisions at Institution-1 had increased substantially, they said. Further, what is now being produced to help support decisions is being produced at a greater rate and with greater depth. The participant cited an example involving in-depth analysis in looking at comparisons with Institution-1’s peer and aspirant institutions, stating that what is now being done had not occurred before.
Much of the internal environment at the institution was described by CAO1 as being “insular here as well.” They stated that most administrators at the school had come from within, including faculty that had been promoted to senior administrators, and even president. Now there is an intentional effort, even if “not necessarily through the hiring piece,” to “get outside of ourselves” even if it’s just increasing conversation and contact with and then awareness of what other organizations and institutions are doing.

**Academic response.** Although CAO1 stated that the institution had not done a good job of evaluating academic programs previously and having not had a process or plan for doing so, this had now become a focal point for the institution. Particularly under the current president of the institution, program review and prioritization was being actively discussed and a method was being adopted for these reviews using published research in the higher education literature. However, it was simultaneously noted that this process would follow the strategic planning work of determining the strategic vision for the institution first, and would therefore occur within that context. CAO1 noted that the program review would likely include not only launching new programs, but changing or eliminating current programs as necessary.

**Leadership style / decision-making.** CAO-1 described their constituents in priority order as students first, “the first group that are in my mind.” Faculty were described as a very close second, and constituting “sort of our collective spirit” as an institution. Below the students and faculty were listed other administrators including members of the executive staff, and the board of trustees. The participant noted that, “The faculty have collaborated very nicely, historically with any [CAO] that’s been in this position prior to me. We have a faculty senate that’s very strong and active.”
With regard to their role as a decision-maker, CAO1 described it as being a “facilitator.” The importance of engaging constituents, particularly faculty, in decision-making was clearly noted by the participant. Specifically, they noted the importance of members of the institutional community in “being heard and having a voice” in decisions. Correspondingly, this individual said, “my role is to helping ensure that they do have a voice.” However, at the same time CAO1 stated that, “I think the spirit in higher education, of faculty, is consensus rules.” While the CAO described collaboration in decision-making at the institution as “being strong” and that it is “very much my role to help create the space where shared governance can flourish, be appreciated, give faculty a voice,” they drew a clear distinction between collaboration and consensus. “I think that the nature of what shared governance is, I think that we’re grappling with that in higher education.” The individual continued, “there is an interesting tension that’s developing around this very topic” now at Institution-1. While it was clear that CAO1 was committed to collaboration and ensuring that constituents had a voice in decision-making, they also noted that simultaneously they had to “help them recognize that consensus may not be the end game.” “I don’t know that I can ensure consensus, I don’t know that it’s my job to do that. I don’t know that that’s a possibility.” For example, they noted that the current strategic planning process they were implementing did not require consensus.

Concerning decision-making processes at the institution, CAO1 spoke of the decisions that Institution-1 was facing in such areas as strategic planning and program review, and stated that the institution, “Didn’t have a culture of any of this. We didn’t make decisions this way.” They said that an important element of the institution’s legacy, and “one of the things that people rave about, what they love about [Institution-
1], is that it feels like a family.” “When all of a sudden you start looking at things that way, it doesn’t feel so much like a family anymore.” However, the CAO also noted that “we’re loyal to our people to our own detriment at times.”

One important element discussed by CAO1 at several points of the interview involved the tension between the liberal arts mission and tradition of the institution academically, and the financial challenges the institution was facing. A continuing commitment to the liberal arts at Institution-1 was mentioned several times throughout the interview. However, the participant stated that questions existed about how the institution would continue to be sustainable in the years to come. The CAO described in clear terms how an institution with a longstanding tradition in the liberal arts, and that had not seen substantial changed in programs or personnel policy, was feeling the impact of its current deliberations. “I think that anything that deviates from that, it’s not just a change, it’s a really scary change.”

The other tension related by the CAO was more personal, and involved changes they were dealing with in transitioning from having previously been a faculty member, subsequently a department chair, and now a senior academic administrator. This transition was difficult in many ways personally, the individual noted. For example, the participant described that rather than being primarily a faculty colleague, as a CAO they had to “renegotiate relationships all the time.”

**Relationship with the CFO.** In this area, CAO1 stated that, “The relationship between the CFO and the previous CAO was pretty poor in terms of again, being on the same page, working towards the same end.” The participant stated that it was their belief that the CFO was serving as far more of a check than a balance in decision-making. They
noted that the institution had a relatively new president, and the CAO stated, “I think that there is a real effort here, especially by this new president, to change the dynamic and the nature of that relationship.” The CAO also reported that they personally were also making attempts to establish a better working relationship between the offices of the CAO and the CFO. “One of the pieces that I’m really grappling with right now is trying to change the nature of that relationship between not only the people but the offices.”

The participant stated that among the tactics being pursued in this regard involved trying to create closer working relationships between the finance committee and the academic affairs committee of the institution’s board of trustees. When asked what changes CAO believed should be made in the area of resource allocation, the answer was that there was a need to reallocate resources. “I think we need to put more of an investment in academics. I feel like we don’t have a financial problem, we have an allocation problem. We’ve got money, we just need to allocate it differently.”

*Use of information in decision-making.* At one point during the interview CAO about was asked about tools and resources used to support decision-making at Institution-1. There was no response. Within the context of the interview, this could have indicated insufficient knowledge about such assets at the school. In follow-up, the topic was approached in other ways by asking somewhat more specific and more structured questions. As a result, the responses were more affirmative and included several examples. The CAO stated that it was their strong preference to formulate an evidence-based case because as a result, “the case itself makes itself in a very powerful way, and it’s not down to simply interpersonal relationships and trying to urge someone and convince them to do something.” “It’s important to me that when I make decisions
people don’t feel that those decisions are made on personality and people. But that they are made on solid information.”

CAO1 appeared to have reflected on the issue of evidence-based decision-making at some length, and at one point referenced this in relation to their previous academic and research work. For example, the participant acknowledged that we all have our own biases that we may or may not be aware of. As a result, CAO1 stated that it was a goal to minimize bias that they might bring to the equation by trying to rely on information that they believed to be more objective. As they describe it:

So any source of information, things that I can use that I can point to that allow me to make decisions that don’t require me to have to… grapple as much with all that internal, personal, experience and history and tradition and perception of my own.

In the area of using both structured, quantitative information and unstructured, qualitative information, the CAO stated that “historically I’ve relied less on the structured data and more on the informal data because I had more faith in it.” When structured data existed in which they had confidence, CAO1 said, it weighed equally with the unstructured data. “I don’t always have confidence in the data that’s available to me, so if I’m uncertain that I can trust that, then it certainly takes a back seat.” The participant commented that one of the reasons for this in their current position related to both data integrity issues and limitations in the school’s ERP system. They noted that this was the case even though the school had only recently transitioned to a new system from a legacy system. The school was said to be still “grappling with those issues.” The CAO stated
that in any event, they did not want to “overvalue statistical analyses and quantitative data.”

CAO1 provided several examples of information that they used to support decision-making in their position. The participant described the way they look for information in other industries outside of higher education, including how decisions are made, what information is used, and the strategies and processes employed. They described this as “nothing overly formalized,” but rather talking with people who live and work in different industries and other non-profit organizations. CAO1 also described the efforts that are now being made at the institution to “benchmark or pair ourselves against peer institutions.” They stated that more survey work is being done, as well as more focus groups, and “lots of more informal conversation.” CAO1 stated that meetings played an important role in gathering information, and described the way they attended a monthly chairs meeting, monthly faculty senate meeting, and the curriculum committee meetings as well as others with as much frequency as possible. “So in terms of the qualitative piece, most of that is being gleaned from either formal surveys, or informal discussions that are being had amongst and between members of the faculty and myself.” The participant continued by explaining that surveys are “a big piece of this too for us, and when I say surveys I don’t necessarily mean substantial kinds – a lot of open-ended work.” The participant said that they not only used, but intentionally went after information, both structured and unstructured, as a sort of intelligence gathering on their own. “Correct. Yes. Knowing what’s going on on campus, talking to folks. Yes. Absolutely. And for me, there is no other way to make a decision.”
Regarding their relationship with the institutional researcher at Institution-1, CAO1 described their relationship as very strong. “There isn’t a decision that I make on the academic side that I make without attempting to gather, or to bounce off of [institutional research] anything I can glean to help make an informed decision.”

The participant described the role that information plays when they are seeking to make cases for change. I related what they had said back to them in asking, “So the data speaks? Or the information, the intelligence speaks?” CAO1 answered, “Yes. And any way that any sources of information that I can have that allow that to happen.” I responded, “So you as a leader will still have to tie up that case.” Answer, “Absolutely.”

**Institution 1: Chief Financial Officer (designated CFO1).** The chief financial officer at Institution-1 (CFO1) had been in the position for a medium span of years (category 6-10 years), but during the interview struggled to express a clear understanding of the institution’s liberal arts mission or the way it influenced decision-making, beyond a very general level.

**Institutional tensions and change.** CFO1 described a number of tensions and conflicts at Institution-1. “There’s never enough money. The budget is always an evaluation of priorities.” The participant related that the institution had implemented zero-based budgeting several years ago, and tied budgeting to the goals of the strategic plan at that time. “You want money, you have to say how it’s going to advance the goals of the strategic plan.” However, CFO1 stated that the approach was much less effective concerning support for operating expenses. “In general,… it has helped us make strong strategic decisions in terms of allocation.” Examples were provided including new academic facilities that had been funded, as well as hiring more full-time faculty and
relying less on adjuncts. They said this was paid for through a variety of means, but primarily through internal resource reallocation “where we saw kind of inefficient allocation of resources,” as well as the sale of some institutional assets. The participant noted that staffing in some areas had also been reduced in order to create additional resources for other areas. “It's not an easy process. It's not a quick process. You have to drag the rest of the community along.”

When asked to explain the influence the institution’s liberal arts mission had on financial decision-making, CFO1 stated that it shapes the student body that we’re looking to recruit, and therefore the facilities that we have to have for those students. “From where I sit on the expense side,” by focusing on liberal arts with some core courses, the institution needs “decent science labs but we don't need research labs.” The participant went on to say that in addition to influencing facilities, it also influenced “the faculty we hire” and what they are paid. CFO1 stated that it had been harder to hire faculty in some disciplines due to the salaries the school offered. “We tend to get people who make the choice for lifestyle because they don’t want to be working 16 hours a day.” The participant added:

I don't pretend to have priorities in terms of…. whether more money should go to science or English. That's not my area of expertise, and that would be crazy. So, my priority is to make sure that…. we’re still in business.

Financial response. In this area, CFO1 began by stating that the institution is now going through a new strategic planning process. However, the participant simultaneously noted that “We don't have a process in place to say what we’re not gonna do.” I asked if a fair way to describe this situation was the balancing of operational needs
versus new strategic initiatives or opportunities. “That’s a good way to put it.” They went on to say, “I can’t cut that service. I can't cut insurance. I can't cut depreciation. Uh, I can’t cut health benefits without firing people. So there is that kind of… ongoing infrastructure, versus strategic.” When I asked about the balance between internal reallocation of resources, not versus, but relative to new revenue generation and how that was playing out, there was only silence. Later, in answer to a subsequent question, the participant seemed to digress to this question. “You talk about new revenues, we haven’t had a lot of those.” CFO1 added some other examples during this part of the interview. They mentioned that student fees, which had always gone into the general operating budget of the institution, were now the subject of an “ongoing debate” at the institution. They said that, “if we do that, it is “only going to make the big, the general pot, smaller.” The participant also stated that there was some revenue-generation that does get split, but stated that this was generally for such programs as summer sports camps where some share of the revenue generated went to the individuals running the programs. “People are always looking for money for their departments, for themselves. And my job is to resist that as much as possible and put it into a pot.”

During the interview CAO1 was asked whether Institution-1 had done any work on program review and program profitability. The participant replied that “it was credit hours taught by each department times tuition, minus direct costs, operating and personnel.” Within the context of the interview, this seemed an insubstantial answer to a very important issue for all institutions. CFO1 added that no decisions had been made on this yet, as the “new president really wants to add in the direct costs and the capital costs into that equation.” When asked whether the participant related this to responsibility
centered budgeting, the CFO observed that “I'm not sure that we would actually devolve that.” But then added, “Well, in a way we've already got it. We say that the vice president of enrollment can reallocate those dollars anyway that he or she wants. So in effect we do say you're responsible for this budget.” The participant qualified this by noting that the allocation of dollars was done at the beginning of the fiscal year, together with a description of how the determination had been made, along with the comment, “Feel free to reallocate.” In response to a question about how well this was being managed and how effective it was, the reply was that, “Each department, you know, can see its budget and its spending on a daily basis. Probably twice a year or three times a year, I send out information on how we’re doing, overall.”

In the area of formal structure or processes used to make decisions concerning academic programs and budgeting / resource allocation, CFO1 spoke at some length about the process and seemed to become more reflective in their thoughts during this series of answers. The participant referenced the budgeting process and the budget committee again, and noted “that's the process and it takes months, and then we make a recommendation to the president, who will accept or reject, and then it goes to the board.” When asked whether the participant thought the process was working well, the participant responded:

See, I would have said it went, was working fairly well. New president, new president. He's heard a lot of complaints about it. Now I’m not sure whether that's that the process isn’t working, or people just unhappy that they don't get the money they request.
When it was pointed out that these seem to be two different things, the participant stated, “They are and they can easily get conflated.” CFO1 commented: “It is a process that's… that’s not a black box because it has so many outside people on it. And, you know, we invite people in to turn… to all our many meetings. We know… we have questions.”

Within the context of the interview, this was significant as it indicated that the involvement by other members of the community brought into the process likely was done in a manner in which a further explanation or defense of requests might be the primary focus of the visit. However, when asked how the budget committee felt about their recommendations at the end of the process, “the level of consensus in that group with the recommended – very high.”

CFO1 went on to express their feeling about the work that had been done in the budget process, stating that they were “very proud of the work the group has done.” He added: “Which leads me to think that most of the complaints are about not getting money rather than the process itself.” When asked to describe the way their role related to the financial operations and decisions of the institution generally, the participant replied: “I think about my role as kind of the back office. My job is to make sure that the rest of the [institution] has the resources to do as much as possible to do the best they can.” Then added, “You know, so we’re kinda the service backbone to the whole [institution].”

When asked how the financial decisions that were made are communicated to the campus community and constituents, CFO1 stated that each year they explain what the process will be to the entire community. “Once the process is done, I explain the decisions to everybody, both in writing and, I can go the faculty senate and explain it to
them, too.” They continued, “In terms of the next step the priorities are the president’s and the board’s, and so I try to implement those as much as possible.”

The flow of the conversation and some of the references made by the CFO concerning budgeting prompted me to observe that it sounded like there were some disconnects between the academic membership of the institution and the budgeting / resource allocation process. “Probably not just the academic membership. Probably the staff membership, too. So you know, the staff departments don’t appreciate it as much, either.”

**Leadership style/ decision-making.** Concerning their constituents, CFO1 did not provide a clear answer and offered no priorities insofar as different groups are concerned. The CFO did not mention students in their response. In speaking about faculty, they participant said:

> We do have shared governance. We have a faculty senate that was created. So the faculty officially doesn't have a role in the budget process. But they were asking questions, and they are the front line, I mean, so that's why we put both the [CAO] and two faculty members on the budget committee so that they are involved.

CFO1 also spoke in some detail about the institution’s board of trustees. The participant noted that while it was their opinion that the board had improved in recent years, they had been frustrated previously by a board that they perceived not to be particularly effective.

The participant described working with the former president of the institution to “bring on new good board members” but that there were still problems. CFO1 also noted that under a previous president prior to their arrival, the “mantra was only tell the board
good news.” “So when I came up and started talking with them about problems or challenges, they didn’t want to hear it.” The participant related how they had tried to show financial comparisons and financial ratios to the board, with “more or less success,” but did suggest that the finance committee was “finally starting to understand what these ratios are showing us.” They described several projects underway with board members that had received no follow up from those members. “In terms of me, I don't think they really understand enough to be good advocates for me.”

CFO1 described their personal role in the decision-making process as:

Organizing it, making it go forward. Making sure that decisions get made.

Making suggestions when people are… don't have strong feelings. How much money should enrollment get for [supplies]. Most people can't care, so I'll make the suggestion. I try not to dictate or push, but just keep the process moving because I want to be a genuine process, not just a rubberstamp. And at the same time, you know, keep the president informed so that when there are tough decisions, he or she has an inkling of what's coming and can either think about it or give feedback before it.

CFO1 also explained that “cost-cutting is also part of my job and in certain areas is much more within my control.” Several examples were provided to illustrate this concerning decisions that had been made that were said to be saving the campus money, with a figure provided for each. He described this effort as an attempt “to kind of reduce the draw on resources.”

The participant provided several explanations and examples for how they navigate tensions and conflicts in their role. They acknowledged that an institutional budget
committee had been formed some years previously. But one of the specific tensions cited was having the members of that committee work together to make institutional decisions rather than ones as advocates for their own areas. “What I'm looking to do, is not have these people advocate for their areas but get different institution-wide perspectives.”

CFO1 acknowledged that they have a perfectly valid institution-wide perspective, but so do others, and that the respective perspective may be very different. The participant also expressed the frustration that “Nobody set up good metrics. Private sector, you know, gain or loss, it’s evident at the end of the day in a sheet of paper.” They noted that, “Middle States does all this work on how you measure, how you assess what you’re doing.” But the internal problem of not having what the CFO said were measures of success regarding financial operations was frustrating to them. CFO1 stated that one of the techniques they were committed to was, “Being as open as possible. And just explain the problems to people.” When asked whether they thought the members of the campus community and their constituents appreciated what they were doing, the answer was, “No, probably not. I don’t think people appreciate it.”

**Relationship with the CAO.** It had become clear throughout the interview, both from the answers to the semi-structured questions as well as from the demeanor of the participant personally, that there were ongoing tensions and issues surrounding CFO1’s role at the institution and how well they believed things were going. It was in this context then that we approached questions of the engagement and collaboration between CFO1 and the CAO as their counterpart in the decision-making process. When asked how that was working, the participant replied, “Oh, pretty good. I had a good relationship with the last one. [They were]… not as engaged as I might have liked on,
on issues that mattered to me.” When prompted to say more about the specific areas where more engagement had been desired, CFO1 answered, “Well, financial, budgeting, personnel.” But they quickly noted that, “Uh, this one is much more willing to get into the weeds. [They] obviously have [their] own point of view, uh, but will not only listen but also try to understand what I’m saying.” I asked if the participant could provide examples of how they were working together, with the response: “Well, like I invited [them] to all the finance and audit committee meetings just so [they] can see what’s going on and learn.” The CFO also added that when there was something that needed to be discussed with the CAO, they would go to that office rather than using email or calling. CFO1 noted that the CAO had been “very receptive to that.” But CFO1 subsequently added, “Uh, so, have I given [them] a complete overview of finance? No. Have I explained particular issues to [them]? Yes.”

Use of information in decision-making. In the area of data and/or information to support decision-making, CFO1 reported that the institution now had a new director of institutional research, “who is much more… has a much better work ethic than the prior one.” The new DIR was described as more willing to help and to provide more data, “so that I am gonna go back to [them] because there is a pattern of success.” The participant also credited the DIR for being helpful in formulating the questions that were being asked, and identifying possible ways to answer the questions. The process was described as working best when the CFO and DIR sat down together, and the CFO asked, “what kind of fields do you have?” “So if we work at it together it's a much better, it’s a process.” CFO1 stated they were happy with the services and information provided by the DIR, and by the way the DIR was willing to working together.
When asked about the use of information, both structured and unstructured, to support their decision-making, CFO1 replied, “Well, in this side of the business the quantitative is key, because those are the answers. But the qualitative is what informs the answers. Kind of understanding what the data means requires those qualitative discussions.” When asked how they gathered this unstructured, more qualitative information, the participant answered, “I don't do it…. in a structured way. But as I said earlier, I like to get out of my office. I like to talk to different people.” The participant then described their efforts to be visible and available by such things as having lunch “so that people can come up and talk to me, you know.” Also included were attending meetings including faculty senate and faculty symposia. “I've been lucky in that people come to me and say, [name], we seem to have a problem, rather than you know, having the faculty senate put out, [rattling paper for effect] this is an issue, this is an outrage.” They noted being fortunate in being given a chance to solve problems. “So it's unstructured and it's informal, but just being available, just being accessible, really helps.”

Regarding tools and resources the CFO used to support their decision-making, the answers to questions were primarily process-based. “We did zero-based budgeting, and we created one, actually three standard spreadsheets that every department has to fill out. One for operating purposes, one for capital, and one for personnel.” CFO1 then described how the budget committee “gets together, reviews every single line on every single department, and it’s not just me, it's – ,” and then listed the other members of the committee which included other finance staff, several administrators, and faculty members determined by the faculty senate. When asked about comparative information
or benchmarks, CFO1 replied that, “Oh everybody comes up with their preferred benchmarks.” They noted that IPEDS information from institutional research was also available.

CFO1 described several other sources and methods to support their decision-making including financial metrics, the budget itself, the audit, NACUBO endowment study, and the CIC toolkit. CFO1 noted that one particular focal point was comparing the published information on internal data from Institution-1 to the ratios and norms provided by the CIC toolkit to help know “how we’re progressing over time, or not progressing over time.” Several comments by the participant were particularly informative. For example, that Institution-1 uses a relatively commonly used ERP system, and that the budget manager uses the system to track spending against budget through monthly reports. However, CFO1 also noted that, “You know what, our business is so cyclical. We get two huge influences of money a year. And spending is fairly constant. So… daily? Not much.” The participant explained that when the numbers become available concerning student enrollment, tuition and fee revenue, and whether financial aid projections had been met, “Those are the times when it becomes all-encompassing.” I would note that as previously defined in the literature review citing various sources, these are the main factors that determine net tuition revenue.

**Institution-1: Director of Institutional Research (designated DIR1).** DIR1 was relative new to their position at Institution-1, in the range of 0-2 years. The information gathered through this interview largely reflected that already obtained from CAO1 and CFO1, though it was generally more convergent with the information provided by CAO1 in several areas.
Concerning their professional background, DIR1 related their previous research experience which was significant. They confirmed that Institution-1 had sought to strengthen the IR function at the school in recent years, and in their words there was “urgency” in doing so. The participant explained that information was now playing a larger part in decision-making across nearly all areas of the institution. DIR1 stated that it was their perception this change was likely related to the hiring of a new president at the institution. The participant explained that the new president emphasized the value of data-driven decision-making, and as a result expected data to support recommendations made by senior officers at the school. A relatively new CAO at the institution was described as a primary source of requests for the services of the DIR, along with several other areas. However, they simultaneously stated that the “adoption rate” of using information to guide decision-making varied across different areas of the institution. DIR1 explained that, for example, the financial area of the institution had only recently increased their interactions and requests with the IR office. In contrast, both academics and student recruitment had moved further toward the use of data in their areas and had become sources of increasing requests for information and research.

The DIR related that significant change was underway at Institution-1. They also stated that the volume of information and research now being requested was putting significant burden on their office to keep up with all requests. Most of the information currently produced by the office was said to be structured or qualitative in nature. However, DIR1 stated that this was not because they placed different weight on structured information relative to unstructured information. The participant cited several examples of qualitative studies that had been undertaken by their office, and related that
this area was becoming a larger part of their work. DIR1 used the term “mixed methods” in describing some of the work they were now engaged in doing. They noted that this was particularly the case involving requests concerning faculty in relation to issues the school was confronting. Surveys were said to be increasingly important in this area.

DIR1 stated that among the most significant challenges in their work were the issues with the ERP system at the institution. The participant also stated that while technology to support the work of their office had apparently not been a priority for the institution in the past, new tools and resources were now being added. They described several examples in this area. DIR1 also conveyed that they worked closely with the information technology unit at the school in the course of their work.

The participant stated that much of the work of their office was related to quantitative analyses and meeting the requirements of compliance reporting in such areas as IPEDS. DIR1 also said that it was their perception information was beginning to play a more strategic role in the institution. As an example, they described the way that more work was being done to gather information related to peer and aspirant institutions that was being used for comparative purposes with regard to changes being considered. DIR1 related that it was their desire to play a more strategic role in the future of the institution, and that they believed the situation at Institution-1 was evolving gradually in this direction.

**Institution-2: Chief Academic Officer (designated CAO2).** CAO2 began work at Institution-2 in the range of 0-2 years ago. The participant has significant previous experience in higher education administration, including at institutions that have been challenged with academic and financial issues. This individual stated that they
wanted to work at a school like Institution-2, which is one of the reasons that drew them there. “I wanted to come to a school this small because I knew we could count every student. We could put our hands on every student. And I preach that all the time. You have an incoming class of [number] students. We literally can know where every one of those kids is at any moment. You don't have that luxury at a larger institution. Also being at a smaller institution it is more nimble and I did get the feeling from [the president] that we could do more things quickly than I could at the larger institutions where I’ve been. And we have been able to.”

**Institutional tensions and change.** CAO2 discussed a number of tensions and conflicts for the institution, particularly in the context of the changes it has seen over the years. One of those changes was the drop in the size of the student population from the highest level to that of the institution now, which represented a reduction of just less than half of the total headcount. This had occurred over a period of many years, representing a slow, general decline. However, recent years had been particularly difficult for the school.

CAO2 described several factors that had combined to put the institution in an exceedingly difficult position over the past decade in particular. The changing demographics for high school students was unfavorable generally, and particularly in the state of New Jersey. The CAO stated that there was a shrinking pool of people going to college, and there was enormous competition for those students. Many were leaving the state for college. And, as they stated, “the recession didn’t help.” It was clear that CAO2 had kept informed about the changing conditions of the environment for higher education, and had thought about the subject at length. The flow of the conversation was
natural and not interrupted by significant periods of reflection on the questions. CAO2 had also formulated their clear perception of the position of Institution-2 in the current context, and how the school would need to adapt to the changes.

Among the most telling of the comments made by CAO2, but in an almost clinical way indicating their reasoning approach, was that there are simply “more colleges than you need right now.” “Because the reality is all small liberal arts colleges are not going to survive. OK, they are not going to because you just don’t have the population to support them anymore. So what’s going to be the discerning factor that separates the survivors from those won’t survive, and that’s the ability to adapt and be nimble, and responsive to the current populations.” The participant noted that there are more adult learners and people simply finishing degrees today. “But that’s higher education now. And workplaces don’t really care. We didn’t think people would ultimately accept online degrees, but they do.” CAO2 then made a surprising statement, but one illustrating the gravity of the situation in higher education, as well as what indicated the seriousness and tension of the situation at Institution-2. “But I think we need to see more schools close. We really do. So that people recognize this is real. This is real. Everybody’s not going to survive, and we’ve gotta really kind of double-time it here to figure out how are we going to be different and how are we going to do business differently.”

CAO2 described the way the institution was working to meet the challenge being committed to both the liberal arts core of the school, as well as the values of the religious affiliation of the school. As CAO2 stated, “we are a faith-based institution, so we are heavily guided by mission.” “And that is very much aligned to a liberal arts perspective.
Certainly there are considerations of social justice, and the access that we provide to the poor and underprivileged, underserved students. That’s kind of who we end up being left with, and that fits right in line with our mission.” As the participant noted, this has been the mission and tradition of the institution since it was founded. With regard to the liberal arts mission, they related that it is a “fundamental component in almost every decision we make.” “Now of course on the other end of that is career preparation, workforce readiness, labor statistics projections, job projections for the future. And that has more of an influence on new programming. But even that new programming that we devise is going to be grounded in liberal arts. Even as we develop new programs with an eye towards job market, those programs are going to be grounded in the liberal arts base.”

Concerning tensions surrounding changes in the general area of academics relative to campus constituencies including the faculty at the institution CAO2 said, “We don't really have that tension, even as we are looking for areas of innovation, it’s understood that they will be grounded in the liberal arts.” The participant stated that “even with our continuing studies programs which is adults completing the undergraduate degree, it’s the same curriculum.” Concerning a reference to institution’s strategic plan that mentioned developing an innovative model for adult learning, CAO2 explained, “That’s really the delivery model. You know, it's really about one of the things we’ve done is something called [name], and basically what that does is that allows students to either go to class face-to-face or go online on a day-to-day week-to-week basis. But that’s the delivery model versus what the content is.”

CAO2 discussed several other significant tensions the school was dealing with, and in which they were deeply involved. “There can be some tensions around rigor,
given the population that we serve, and which is tied to our mission that many of these students come to us underprepared. Helping faculty to understand, just because you teach the students in a different way doesn't mean it can’t be a rigorous curriculum.” They noted that it required a lot to successfully onboard these students, to get them acculturated to college life and the expectations around college work. The participant also mentioned that most faculty “don't really have that experience.” “They have an experience more along the lines of students coming ready to take on the college curriculum, having the self-regulations, self-motivation skills to be self-directed with a college curriculum.”

The reality was that more and more students don't necessarily have the required skills, CAO2 said. They stated that it was their experience that even more competitive institutions are finding that students are increasingly underprepared. “We certainly know the K-12 system in America leaves a lot to be desired.” The participant also noted that many four-year institutions cannot do developmental work concerning student unpreparedness. “They can’t do summer bridge programs for underprepared students. The expectation is that those students will go to community colleges. And [those students] don’t really have the same kind of access to that comprehensive liberal arts education.” CAO2 continued, “I still believe that students, those students can take on a four-year degree, it just might take five years. It might take a little bit longer but they can still do it, and we’re committed to ensuring that they do. But given also the fact that those students don't tend to have high wealth and have limited resources, and don't necessarily have access to the kinds of resources to support a traditional liberal arts education.”
Another significant tension CAO2 spoke of involved affordability and accessibility. They noted that Institution-2 had always been about providing access in higher education to marginalized groups, “And for the longest it was Italian, Polish, Irish working-class. And today is African-American, Hispanic, international students.” The participant related that at least a third of the students, and most recently 40%, are first generation students. “And you know, one of the things we used to say [at other institutions where I’ve worked] is that it doesn’t matter where you are when you arrive, it only matters where you are when you leave.”

Concerning the role of the faculty and shared governance in institutional changes, the participant said, “I’ve talked a lot about the students, and the students that we serve. You know, with the faculty, our faculty have typically been here an average of 16 to 20 years, so they are lifers. They’ve been at the institution, this is primarily the only institution where they have worked, which can be a good and a challenging thing. And you know, the good thing is that they are committed to the institution.” “The challenge of course, though, is that they believe in an institution that might not still exist. You know, they believe in the institution of yesteryear. And they also don't necessarily have the exposure to the reality of higher education in general.” They continued, “it’s no longer about individuals conforming to fit into college culture and content, the colleges have to accommodate the students. We have to work.”

CAO2 noted that faculty have a tendency to blame the admissions office and contend that it isn’t admitting better students. “And they don’t understand that this is the reality across the board, that you know, the little blonde, blue-eyed Irish girl in the panel-sided station wagon isn’t pulling up anytime soon. She’s never coming back and this is
who you have to teach, so what can we do to help you understand and be prepared to teach this student? And realistically, a student who you never thought you would have to teach. A student whom you never thought you would actually have to encounter at a school like [name].” They made a personal comment in noting, “And it wasn’t until I got here that I understood, that the college was never like [what I had thought]. You know, it was always for working-class [students] and the fact they [could get here using public transportation].”

The CAO reported that, “Race and class are big things we talk about right now because that’s an important part of the conversation in that you can't teach someone you can’t have a relationship with.” “We are having those really frank conversations about race, class, identity, belonging, climate. Cause you know, that’s gonna be critical to our success in educating the students we serve.”

Another tension mentioned by the CAO involved the way students today learn. “They don’t necessarily… I think there is a disconnect between how these current generations learn and how we tend to teach what we expect.”

With regard to other constituents and their view of change, the participant stated that there were a lot of alums on the board, many who “came from a different [name of institution], who want to have conversations about things like how [religious] we are.” CAO2 stated that the current president had done a lot to change the profile of the board, including adding new members and increasing diversity. “We have two people of color on the board now.” The participant added that some of the board members had previously held roles involving the religious organization affiliated with the school. CAO2 noted that interestingly, “The ones who are active with the college, are actually
more progressive than some of the members of the board. I mean because these are
[people] who have been engaged in social justice issues and service their entire lives, so
they understand and embrace progress,” and have more liberal views. The participant
stated that less than a third of their students are of the religious affiliation of the school.

CAO2 noted that concerning alumni, “You know, they can be a challenge, again,
because of their, certainly their lack of understanding of what’s happening in higher
education and their reticence to really embrace what the school is doing right now and to
be a part of that.” When questioned whether the board and the alums view this as an
opportunity to serve in different ways, or whether they view what the school is doing
today as a loss and somehow being diminished as an institution. “For the alums, more of
a loss. You know, they see it more of a loss. They have a difficult time identifying with
the students who are being served at the college now, and again, they don't know the
realities in higher education. The president brings them research and data and articles,
and so at least the board has the responsibility of being somewhat in touch with the
realities of higher education today. Whereas the alumni, not necessarily.” CAO2 also
noted that there had been a significant drop in alumni giving. They also noted that in
attending alumni events, there was a stark difference between the attendees of the event
and the student population of the school. “There is no diversity whatsoever in the entire
room.” They continued, “they’ve lost sight of the fact that 30, 40 years ago they were the
marginalized, disenfranchised, denied access group.”

CAO2 described their perception of the way Institution-2 had arrived at the
situation it now faced in terms of the financial challenges confronting it and threatening
its survival. When asked whether the lack of response had involved lack of
understanding of the problem, lack of a sense of urgency, or other factors, CAO2 answered: “I don’t think there was ever any urgency. I don’t think there was ever any real urgency about ‘we need to understand this better.’ I mean it was really people were just, people knew the college was struggling financially. And some drastic decisions were being made with the [the current president].” They noted that the current changes reflected “big paradigm shifts” for the institution. “I mean we really have to change things internally to be more competitive, to get more revenue, to have better retention. So no, there was never that urgency and people didn't really see it as their problem to solve.”

The participant continued to explain the history leading Institution-2 to its current situation by stating, “I guess in the college’s defense there was a lot of instability for a while.” They noted that several people had preceded them in the position of CAO over a period of just a few years. CAO2 also noted that the president had had to “get the financials straight, and so [they’ve] been working on the financials and I come along and I’m really looking at the academic programs.” The participant noted that the institutions had implemented layoffs, and that the college hadn’t provided pay raises for about seven years.

So people knew it was a dire situation but I think also, comes the territory of a fairly entrenched faculty and staff, people who really haven’t been any other place and don't really have at their disposal other solutions and ideas about how do people do this, how do people turn around a college.” When asked whether the participant would call this insularity they answered, “Right, you know, the inability to solve the problem at the level of the problem. Right? They’re in the
problem, and they’re doing what they’ve always done, so where are they going to find, you know, the vision or the resources or the solutions that would really be applicable to them.

The participant spoke about the challenges the school is facing, particularly concerning the students that are now enrolling. But they spoke of this reality as also an opportunity.

And so I want us to be more responsive to that and actually use that as a strength. Because they're here, and they're coming here, and I can see where those families are interested in a school like us because we’re small, they appreciate the fact that [we have a religious affiliation], we’re close to the city, where a lot of their families are.

“We do have a lot of positives. And a lot of things we haven’t necessarily been able to capitalize on just yet.”

*Academic response.* One of the most interesting aspects of the interview with CAO2 involved a discussion about the nature of the liberal arts, particularly in the context of a rapidly changing higher education landscape. The participant stated:

I have been thinking about how do we understand what the liberal arts are. Is it this conglomerate of interdisciplinary courses that is the foundation of the Western Canon, is it that, or is it an understanding, a broader understanding of different disciplines and different skillsets. I mean, I think we’re not all functioning with the same understanding of what liberal arts really are.

When questioned where they were on this thinking, and specifically with regard to their position as CAO at Institution-2, the participant said:
I guess it’s not so much about courses but it’s about skills, thinking critically, speaking well, writing well, understanding and being able to decipher different types of text, and I think it’s a very different, and has to be a very different kind of approach for the realities of today.

CAO2 stated that traditional liberal arts and what many students and parents are looking for in choosing a school today should both be achievable. “Right, you know, you get a job, but then you have a broader understanding and perspective on the world.” They also noted that the institution was trying to find innovative ways of dealing with this. “We just find innovative ways to do that without adding more to the length of the degree, you know, trying to keep the requirements, in control.”

The participant discussed significant changes Institution-2 was working to make in the area of teaching and learning. For example, with regard to the way students learn today:

How do we use their phones as a learning device, how do we take this new learning style of the generations that are coming up and really make it beneficial so that we can satisfy the learning outcomes that are commensurate with a liberal arts education?

CAO2 noted that the institution had changed its general education program several years previously. “We went from that a la carte model to a more comprehensive, interdisciplinary approach.” They related that:

We also have redone our schedule for the freshman year. We were spending a lot of time with freshman talking about ‘what do you want to take,’ ‘what are you interested in,’ and you’d find the enrollment in classes would be spotty. Last year
we started with preset schedules for the freshman. We don't let them declare their majors until the second semester of their sophomore year. And they basically all come in undeclared, but they come into three tracks: the health and physical sciences or STEM, social sciences, or arts and humanities.

The participant described the way in which every course students take in those first two years within their track would satisfy any major in that area.

So it kind of cuts down on the credit loss when students change majors, and it also creates more critical mass in the classes because then the electives from the other tracks are the courses in the other tracks, gateway and milestone courses. And so what it’s done is it’s helped us create more critical mass, but it’s also helped to give students more exposure to those areas that, possible majors in areas they’re interested in.

When asked if they could provide a specific example, the CAO replied: Freshmen students wouldn’t want to take history. They really just wanted to take the courses in areas that they were interested in. They would only take courses that they thought would be relevant to their major. Now the history class had 20 students in it.

Concerning a financial advantage in this way, resulting from cutting down on the number of sections and whether this had played a role in that decision, CAO2 said, “Absolutely. Absolutely. It was motivated by… I mean I hate running classes with [unfilled seats].” Although it was not stated whether these changes were driven more by academic or financial reasons, CAO2 confirmed that these changes had helped the institution both financially as well as academically.
CAO2 discussed other aspects of the academic changes underway at the institution:

There are other options in the health field that we’ll introduce you to in your first three semesters. So we’ve started doing that just because we started realizing that, again, particularly the students we serve, the majority of them come in and don't even have a clue about the kinds of jobs, opportunities, and careers within the fields they're interested in. And so really taking that time, which I think again is a liberal arts approach of exposing them to other opportunities, other fields, and other approaches within the disciplines that they’re interested in.

The participant added that there were other reasons for taking this step, as well.

Students who aren’t familiar with college, who are first gens, who don’t necessarily have it together, I don’t think it’s smart to pressure them to declare… Declaring a major isn’t what makes you successful in college. It’s knowing what you want to do, going there, and doing it. And so we had five, six years of data where our undeclared majors persisted better than others. And it wasn’t because they were the higher group. They had higher persistence rates. And I think it had a lot to do with students going in with this idea of majoring in something, and then not being successful at it. Whereas, when students came in with a broader mindset about ‘OK, I’m going in, I’ll figure it out,’ they persisted better because they figured out wanted they wanted to do as part of the process of being in college.

The participant concluded by saying that with regard to declaring a major, ”they figured it out versus when students experience the first failure, like in STEM. They have
a hard time recovering from that. And so a lot of them will drop out just right after that.”

When asked how the institution had become aware of this, they replied,

> So we had the data, it was in our fact book. I was like, ‘Why didn’t we do something about this?’ ‘Why didn’t we act on this, with the data sitting right in front of us?’ Like who’s persisting, who isn’t, our attrition rates. And so taking that data and putting it in front of people, and saying ok, look, this is our data, these are our students.

CAO2 also spoke to the efficiencies and benefits in offering courses and programs at Institution-2:

> It gives us more time, now that time that we were spending pouring over the courses and trying to help students figure out what to take, we actually do a lot of individualized inventories and aptitude assessments to help them start thinking about their strengths and where they might be a better fit in certain disciplines or careers.

The issue of student retention was discussed again relative to any additional steps that were being taken in that area. CAO2 responded that this had investigated this in multiple ways,

> And unfortunately with us doing that, we haven’t really been able to discern a definitive pattern of why students leave. That’s what I was hoping, that we’d find some like clear-cut understanding of something we can change to retain more students. But it’s kind of all over the board. I mean, we are realizing now more that we’ve recruited students who just can't afford to be here. And that’s a really heartbreaking thing for us to come to terms with. You know, they belong here,
we could help them, but they just don’t have access… And ironically of course it's the more middle class students. Your really financially needy students get all the aid.

Concerning information on what happened to students who left Institution-2, the participant reported that when students transferred:

The main people we lose students to is county colleges. William Paterson. They’re not so much a peer, they’re much bigger than us. But I think students get a sense that they want to be someplace else. But I don’t know how much we actually lose students to [our peer] schools. We probably lose more students to [name] County, and [name] County College.

When asked how the participant had learned about the student retention problem, and whether it “was through data reports or intelligence you picked this up –,” the CAO interrupted with a definitive reply. “Intelligence. The retention committee, our advisors, our retention coordinator.”

In the area of program reviews and assessing cost versus revenue generation, CAO2 said that the institution had done quite a bit of that and that it was continuing. For example, “We have a lot of programs that are kind of just service programs now, we discontinued the major. We are looking at changing some programs.” Examples of changes to programs cited an allied health science program that’s now become a health administration program, renaming computer science to computer software engineering, and a data analytics master’s program.

None of this had really been done in years, nobody really trying to look at what the market’s doing or what are majors doing. What do you call new majors. So
trying to really refine, what is our product? What do we do? Because people who are looking for majors and looking for programs, they know what they're looking for. They’re in the market. They are looking for where jobs are. So we need to be able to show them our programs align with the job opportunities that you're trying to get.

However, they stated, “We’re trying not to just kind of respond to everything that comes across the desk, you know.”

The participant related in some cases, work was being done to essentially rebuild academic programs after some of the losses at the school. For example, CAO2 noted that in the past the newest, most recently hired faculty were the first to be laid off because they didn’t have tenure. This had impacted some programs more than others. Now, there was need to rehire faculty and rebuild programs that had essentially been dismantled without specific intent. The participant provided another example of a program that was being crafted to meet the needs of the students now at the school, involving business and entrepreneurship. The CAO mentioned that “a lot of our students’ families, they’re immigrant families and they have small businesses.” When asked how the participant new this about the students, they replied, “Our students, many of them were born here, but their families are immigrants, and so a lot of issues around immigration” They explained that many of the students were born in the U.S. and so have citizenship, but that their parents weren’t documented. “And we know like just like anecdotally. But they go back on weekends to help their families and to work for their families.” When asked if this knowledge was the result of a study that had been done, CAO2 said, “You go to the cafeteria, and know you’re sitting with a bunch of West Indian girls, you know,
just talking to them.” This was indicative of something the participant had mentioned several times throughout the interview: the ability at a small institution to be able to connect with each and every student at the school.

**Leadership style/decision-making.** When asked about their role in decision-making and implementing changes at Institution-2, the CAO replied that there were the usual kinds of expectations and general responsibilities normally associated with the academic affairs office.

But I think specifically at this institution, I’m really here to push. I’m really here to push the agenda and help the school move a little faster than it typically would. And to do that using their own data. Higher education institutions kind of got lulled into business as usual, no matter what the numbers said, students will come here year after year, you know things just kind of rolled along. But you know, a lot of schools roll themselves into a whole lot of trouble, a lot of debt.

The participant described the way they navigated tensions and conflicts associated with the decisions and actions commensurate with their position. “Well, it depends on what constituent group I’m working with.” When asked if they would consider this situational, CAO2 replied:

Right. It’s really situational. Now, for me at the end of the day it’s about relationships and allies. So if I’m dealing with the faculty, and I’m trying to get something approved by the faculty. I’ll have a lot of individual meetings with faculty. You know, see where they are, feel them out. Have that conversation.

CAO2 related something they had learned from another president in a state system with an active and intrusive board. “Count your votes. Count your votes before you go into
the meeting. And know you’ve got it. If you don’t have it, don’t do it. So that, you
know, it doesn’t die on the vine in the meeting.”

The participant stated that relationships and conversations with cabinet colleagues
were also important.

And having a lot of one-on-ones with the president. You know, making sure
[they’re] clear about the direction. We’ve changed a lot of things pretty rapidly
since I got here. And we couldn’t do that without [their] support and blessing,
and [their] buy-in.

When I asked if their relationship with the board was a factor, they answered that
they were not the direct liaison with the board, that this responsibility belonged with the
president. But then added, “I am kind of the face of that [new] program, and the
president usually will direct me or prep me with who might be the obstacles with certain
things. And they will say ‘go sit with so-and-so for lunch.’” They added, “So for me it’s
about negotiating the relationships, and building the relationships that I need.”

CAO2 discussed the way they interacted with faculty, particularly concerning
tensions and changes. “You know, I have some really recalcitrant faculty. I have faculty
who are just basic obstructionist to the administration in that kind of very basic
dichotomy of us and them. And I really try to do everything I can.” They continued by
describing an incident where a difficult faculty member had been elected to represent the
faculty.

I had the conversation with [them], and said, ‘Look now, you know this is our
new structure, it has to be transparent, we have to be able to trust each other. We
have to be at least committed to finding some common ground, compromise, on both sides.’

CAO2 stated that in a very short time, the individual resigned the position of representing the faculty. “I had a conversation. But it was the real conversation. That’s what shared governance is.”

CAO2 spoke about the history and role of shared governance in decision-making at the institution.

Well, this is a new structure for us, they never had like a shared governance structure. But that was what I tried to get them to understand. It’s shared governance. It’s shared. It’s not faculty governance that the faculty gets their way this time, and then I’m gonna get my way next time. You know, it's all about the relationship. It’s all about sitting around the table, hashing it out, what are you OK with, what are you. And if both people leave miserable and disappointed we probably did the right thing.

When I commented that this sounded like the concept of the Franklin compromise, they replied, “Right. It’s a compromise.”

CAO2 stated that one of their reasons for coming to Institution-2 was the opportunity to make a difference at a smaller, more agile institution. “To do something and to see what’s been the impact.” The continued, “To some extent you go to a smaller institution and with a love of data, it’s right there. You’re looking at it. You’re looking at everything you need to know.” The participant stated that the school’s freshman to sophomore retention goal was [number]%. And when that was broken down, it translated
into how many students were needed to be retained beyond what it had been the year before in order to improve. This had allowed the CAO to say:

I’m telling you, you need to retain four more students than you would have normally. So you have to figure out, who are the four I’m going to go after? I would retain these anyway. So how are you going to turn that four for me? You gotta break it down for faculty to that level. I need four more students. Give me the names of those four students you’re going to turn over for me.

When it was suggested to the participant that these kind of actions were beneficial both financially as well as academically, CAO2 replied, “Right. Exactly. But breaking it down to them by the number. That’s how we’re going to get to our goal.” They continued, “You know, I say to my faculty, if you want to just come and deliver lectures and go home, this isn’t the place, it’s not that institution. You have to learn things too.” And added, “Faculty kind of have their blinders on and it’s very myopic, what they can see in their program and how their majors are doing. But I’m looking at all the students.”

**Relationship with the CFO.** When asked about their relationship with the institution’s CFO in the decision-making process, the participant began by relating that the CFO was relatively new at the school as well.

The relationship I have here is fine. Because we both work along the lines of what is the president's vision. When you're at an institution where resources are really, really strapped then there's not really much to talk about. We’re just trying to keep the doors open. We don't have any fat to trim up, and dole out, and I think that’s how the college has been functioning in previous years. More recent years, it’s been more fat, and that's a great thing. But now you have the question
of institutional priorities and where does that go. How do you use this. So [the CFO’s] been a great support in helping me think about what aligns best with the president’s vision. Where do we make the prudent investment to get some return on revenue.

When asked to say a little more about how the two worked together, the response was that the CFO was, “Pretty direct about what is and what isn’t. And then however the president wants to spend it is on [them]. [They’re] kind of just there to be the arbiter of the reality of the financial situation.” However, it should be noted that the manner in which the CAO relayed this was not negative, but merely objective and as a matter of fact.

The participant described the way in which the president had done a lot to turn the institution around financially. “[They] did pull it from the brink.” CAO2 noted that the CFO was not here when that had occurred. In a personal note the participant added:

And moving a small [religiously affiliated] college into the 21st century where previously the budgeting process was like some kind of cabal, of you know, secrecy, in a conclave, and when is the smoke gonna rise. But now there actually is a budget advisory committee where faculty sit on it, and we actually talk institutional priorities, and whether there’s gonna be a deficit, and you know, it’s all in the open air.”

CAO added that they thought that even if the school weren’t doing better financially, “I think that with this particular CFO it would be the same kind of process, the same reality. You know, even if the news wasn't great, it would still be very transparent.” CAO2
added that they thought one reason the institution had gotten into trouble was, “Because it made budget decisions in secrecy.”

The CAO related that they were now working with the CFO on a gap funding process, but that they still had to understand how it was different from a fund budgeting process. In a somewhat complimentary way, CAO2 noted, “I think [they’re] making those kinds of changes, and I think helping the college be much more understanding of the budget process.”

*Use of information in decision-making.* Based on the answers and discussion to this point of the interview, it was observed to CAO2 that it seemed they both use and value data in decision-making. “Sure. I don’t see how you could do higher ed without it.” When asked if the participant could describe some of the most significant tools or resources they used in decision-making with more specificity including software or tools, they replied, “I wish. Oh, my gosh. You know even our student information system has been pretty compromised because they’ve done a lot of workarounds, and they don't use the right fields and the right coding.” CAO2 stated that the institution had been working to clean that up. They were in the process of an update to the institution’s [ERP] system that they had been told would help.

In further explaining the way they approached information gathering holistically the CAO stated, “So again, the benefit of being small is, I don’t necessarily have to count on the software systems. OK, who's come in to register, where are they. So I don’t depend on those as much.” The participant went on to say that the data they were using form the ERP system was essentially secondary to word-of-mouth from people like...
advisors: “Who’s coming back?” They also described the importance of the retention committee:

Every other week we meet and talk about who’s at risk. So certainly, under my watch we’re never surprised by who’s leaving. We know who’s leaving. Because we’ve been trying to save them. So it’s been really about communication, and the fact book for comparative data year-to-year.

The CAO went on to say that they had developed some concerns about the figures in the school’s fact book, including how they were calculated. “And what do you do at this point if you look at the fact book and like, OK, this five-year dataset is not right. You’ve already reported it, and you’ve been reporting it wrong.” CAO2 did state that efforts were being taken to ensure that the data they were currently using had been validated so that it could be regarded as reliable to support decision-making. When asked to respond to a statement in which I observed that they appeared to use information from multiple sources and almost cross-reference that information to make certain that you have confidence in the information, the participant replied, “Absolutely. I mean, again, we have a freshman class of [number] students.” I then asked if it was accurate to say that the information they found useful could be quantitative, quantitative, anecdotal, observation. “Right. For me, it’s all data.”

As an example to illustrate this approach of using multiple points of information, the participant described how they would “call every program” and ask, “Where are your students? Who’s coming back, who’s not?” Then they would go to preregistration and look at the numbers and compare them to what they were being told. “And I really push
us to understand what happened with every student. Every student we lost, what was the story?”

Concerning the Institutional Research function at the school, CAO2 stated that the Office of Institutional Research at Institution-2 was actually only one person. “[They’re] great. [They’re] like the data hound. [They] love you to throw a bone to [them], like tell me this.” However, CAO2 added that the current DIR was relatively new in the position, having assumed the responsibilities of institutional research only recently. CAO2 also mentioned that the new DIR had brought some issues about previous data reporting to light. “It wasn’t necessarily that it was wrong, but the way you would typically read what you were looking at wasn’t exactly what was calculated.” The participant noted that the new DIR was working to change that. “Everywhere I’ve been the institutional research office is critical. You know just absolutely critical.”

The participant also described the way in which they had incorporated information into a central role when dealing with academic decisions, including those involving faculty:

And so when I meet with faculty I have a broader meeting called the academic assembly. And so that’s faculty, but it’s also academic support services, where all we talk about is data. That’s all we talk about is data, and I just put it up. This is where we are at midterm.

CAO2 stated that they had implemented a third week assessment “because I thought we needed an assessment prior to midterm because midterm is too late in a lot of cases for students to turn around.” Then added: J
Just putting the data up there, this is it. This is what it looks like. What do you think? Does this reflect what you're seeing in your classes? So I just really wanted to have that opportunity to share data with faculty so they understand what… where I’m sitting.

The participant again took the opportunity to reinforce the criticality of student retention to the institution, as well as how leadership and information was being used to address this.

And the reality is the challenge is the freshman. We gotta keep them to start off with, and we can’t have this mentality of well, the weakest ones we weed out. We can’t afford to weed out anybody. We gotta save ‘em all. And trying to get into one common mindset about how to do that. And one way to do it is to put the data up, to show what the third week assessment has done, show what the mid-term grades look like.

I asked if financial impact was also used to make the case. “We have done that. The president’s done that before, too. Like looked at all the freshmen we lost, disaggregate that out over years, and what that financial impact is to the [institution].” This was seen as significant for additional reasons. The fact that the president was also focused on the issue and acting on it was notable. In addition, it conveyed a strategy of getting everyone involved in an issue to acknowledge a single version of the truth, an authoritative source for information.

When asked if there were any other tools or resources they would like to have in order to support their decision-making, CAO2 commented that they were very hopeful that the school’s ERP upgrade would make a difference. The participant also added, “I
would love like a real-time data dashboard. You know, that gave me everything from attendance data in real-time, to students grades in courses, you know, in real-time. With things that have perceptible shifts from week to week.” The participant went on to say that they were looking at implementing a card-swipe system where students would swipe into class every day, as a means of information gathering concerning student class attendance in order to help support student success.

At the end of the interview, CAO2 was asked if there was anything that they would like to add or anything that I might not have known to ask that they believed would be helpful to know. The answer given was a crystalized version of the entire interview in ways. It underscored the way in which CAO2 appeared to have developed a clear, well-defined way of looking at the school and its challenges, as well as the way in which they were approaching their job to help bring about important changes.

The majority of my time is spent building relationships and getting the information I need, not just from what I see in the fact book, not just from reports that get generated. I mean that to me is just one data point. I don’t always trust it, especially if it doesn’t look right. And again, because our numbers are so small, percentages can be skewed very easily, so that’s partially why the qualitative and the anecdotal becomes important.

In closing, CAO2 noted, “I really want to end up like at some institution where, Yes! The data is good.”

Institution-2: Chief Financial Officer (designated CFO2). The chief financial officer of Institution-2 (CFO2) had been in the position for a limited time (category 0-2 years), but had a clear understanding of the institution and its mission that closely
matched the published information from the website as well as other sources. CFO2 related that they had taken less money to come to Institution-2, but that they very much liked working at a small institution. They also stated that the two things that specifically appealed to them were the president of the institution, and the “challenge of a turnaround.” In their words, “it gets the juices flowing.”

**Institutional tensions and change.** CFO2 spoke in substance and detail about the challenges facing the institution, but framed nearly all of them as opportunities. The participant also was clear about the importance of the institution, both as a liberal arts institution, and with regard to the way the religious affiliation of the institution shaped the values and purpose of the institution. “Almost everything is guided by mission around here.” In particular, the mission of the institution in serving the underserved was at the forefront. “So expenditures, focus of projects, is tied directly to the mission and the strategic plan. Which is all linked.” “I think we live that on a daily basis if you look at our enrollment, it’s pretty strong evidence of who we are trying to serve.” Over the years, this had shifted from the original groups, to a greater proportion of African-Americans today. The current proportion of minorities at the school in undergraduate programs was said to be approximately one-third.

CFO2 described the way the institution had found itself in a very difficult financial situation:

There was a slow reaction to the declining enrollment levels, is my take on it. So expenses were higher than I would have thought they should be, and obviously when [the president] came in there was action actually taken to try and match the revenue and expenses.
A number of reductions-in-force (RIFs) occurred at the school in years past in an attempt to respond to the worsening financial situation of the school. “We haven’t had a salary increase here in several years.” “We haven’t contributed to the 403b in about four years, so we’re looking to start that up, too.” The participant stated that employee attrition had become an issue for the school, and was running at about 20%. “So if you’re young, good person, you’re probably gonna move on. The people that stay here are people that’ve been here for a long time, or people who are really committed to mission.”

Concerning recent institutional changes CFO2 said, “I know since the president, [name of president] came in there’s been dramatic changes.” The new president had arrived 3-5 years ago. “Initially, it was stop the flooding. So there was dramatic expense cuts in the period [they’ve] been here which was a necessity or otherwise we would have been closing the doors.” CFO2 also described the manner in which the new president had brought in almost a completely new leadership team to help address the school’s problems. “[The president] turned over [their] cabinet. There’s one person left who [they] inherited.” The president had brought in more diversity on the cabinet, and as a result the CFO described it as a more balanced cabinet. They noted that the new cabinet also more closely matched the student population of the school. “So there's a pretty decent bounce and it reflects more closely to the student body than had been there in the past.”

The participant noted that things had begun to turn around at Institution-2. They related that last year the institution had seen a small budget surplus. As a result, they gave employees a 2% bonus. This year, the school was building into the 2017-18 budget a 2% salary increase for employees. As CFO2 related:
The fact of the matter is, two years ago there was a small operating surplus. Last year there was a [amount] operating surplus. While we had budgeted for a slight deficit this year it looks like we’re actually gonna have a surplus this year also. So there’s good news there, but the problem for us is that it’s been coming from different areas and not the headcount.

CFO2 related that this year the school had missed their student headcount target by about 50 students. “This coming year we’re hoping to keep it at [the current level], so it’s leveled off and then we can hopefully have an upswing.” The participant was surprisingly well-versed in the issues involving academics and student enrollment. As they explained:

The challenge for us is to get students who can succeed here. So retention a key issue for us. So, who do you target? Who do you want to bring in? It’s very difficult to identify high potential underperforming students, and maybe underperforming because of the high school they’re in. It’s not particularly the student or what they’ve got.

The participant described the fact that the institution is highly tuition-dependent at “85% give or take tuition, student related revenues.” At the same time, CFO2 also described the way in which this translated to problems with tuition dependency concerning the students the school served: So the challenge [name], the enrollment guy, will live on enrollment. It’s important for us to get people who can pay and who can stay here. So pay for us also means TAG, Pell, loans, that type of thing. And developing programs for those students who probably weren't served as well as they could have through the high school. Identifying
them and making sure we have programs to keep them. So, you know it’s a challenge. Get everybody in because we need the headcount, but at the same time you want people who are gonna succeed here. You know, we’re all involved in enrollment management and bringing students and keeping students here at one level of another. The pressure is clearly on the [head of enrollment management], but we have to work with them.

CFO2 also related the efforts the institution was making to take students who were underprepared for college, “working with them from the summer before they even start all the way through” as a way of supporting enrollment. “There's been programs developed through academic affairs that have focused on helping students make sure they are successful.” This was said to be demonstrating success. “For us the traditional seems to be working. [We’ve seen] a nice surge in enrollment and it looks like we’re going to maintain it based on the applications we’re seeing.” But counter to the situation found at other schools and as described in higher education publications, non-traditional programs were more difficult at Institution-2:

It's the continuing studies that's a real challenge for us. We’re offering four new graduate programs, we think will have a decent impact on our graduate program and that looks like it's stabilizing and in fact maybe growing. Continuing studies is a challenge for us. What can we do to grow that.

Another, more local tension was expressed by the participant to be the resources available to the CFO to do their job well. “And it’s not like we’re deep here. I don’t have a lot of talent.” The participant stated that employee attrition was also a problem in their own areas of responsibility. This factor has been shown to be even more
problematic in organizations with lean staffing, where cross-training possibilities are limited, and employee losses can significantly impact operational continuity. In addition to the financial area, CFO2 also had responsibilities for a number of other areas including facilities, human resources, and information technology. “I’ve got all the support functions, basically.” The participant went on to describe the fact that deferred maintenance and upkeep of facilities and infrastructure was a problem, including the impact on the availability of information to support decision-making. “The [IT] infrastructure here is old and weak. And it’s been patch jobs and didn’t really think through, and they don’t really take advantage of what's available within the existing system, as we’ve found out.”

In the positive manner in which CFO2 was found to characteristically view the challenges of the school, they described their perspective on the progress the institution was making in terms of the turnaround. “So we’re cautiously optimistic. For us, we know what we want to do. We think we’re gonna get there, but it's keeping expenses in line with the measured revenue growth.”

**Financial response.** CFO2 stated that since coming to the school they had begun taking steps to improve the financial situation, and working very closely with the president to do so. As they explained:

And I’m a little bit more aggressive, I think, than some of my predecessors were in what… We’ve delayed a lot… We’ve spend a lot of money, I don’t know what we spent it on, quite frankly… in the past. Because there was a lot of deferred maintenance. And obvious things to fix. There are a lot of things on the IT side that we had to do.
The institution’s strategic plan played a major role in the budgeting and resource allocation process at the school, as related by the participant.

CFO2 reported that a budget advisory committee had been established prior to their arrival and was now being emphasized much more with regard to institutional decisions. The participant noted that the president was a “really big believer in that.” The focus had very much become one of tracking progress and staying on track with plans, and that activities and initiatives were tied to that. “The budget advisory committee’s just a tool for us to keep people involved and focused on that. So mission is at the forefront here. You know, we track pretty closely to the strategic plan.”

In addition to the emphasis on ensuring solid enrollment and retention, as noted earlier, the CFO also stated that the school had only recently begun a process of academic program review. “We’re just starting that. I’m just starting that. I did it at my last place because we ended up cutting faculty and cutting programs.” It was clear from the interview with CFO2 that the institution had gone through a process of controlling financial losses, then transitioned to strengthening enrollment and retention, and was now moving to look more structurally at programs and ways to improve the revenue cost-generation balance as a way to strengthen the financial health of the institution. As CFO2 stated:

You know, you cut a lot of places, but I think it’s my role to make sure we stay on track on the budget and get the things we need that are most obvious and that have the most impact.

The participant described important steps the school had taken in the recent past, since CFO2 had come to the school, in which they had played a major role.
When I got here, I was replacing an interim [CFO] who had [their] hands full. We were trying to refinance. And really my first year was focused on refinancing. Cause it was a major effort for us. Banks didn’t want to touch us. And we were concerned about bond ratings and how we would be perceived in a market. But fortunately we were successful.

The participant had described several of the financial responses that were being employed at the institution since they had arrived at the school. When asked how well the financial decisions that had been made since they arrived matched their own priorities, CFO2 replied:

So far I would say surprisingly well. And I think it’s because we know we’ve got a big task in front of us, people are used to the expense cutting, and a lot of the things I've done, and really in the IT and the facilities area, where we haven’t spent a lot of money in the past, has been well received and never questioned… Because it’s visible. You know, and has a big, visible impact.

**Leadership style / decision-making.** During the next series of questions, CFO2 discussed issues related to leadership style, processes and structures used to support institutional decision-making and similar issues. When asked about structures and processes the school used to develop decisions and recommendations, the reply provided insights about not only the school, but CFO2’s approach:

Well, I guess the best example for me would be the budget advisory committee which we use. So there's a budget advisory committee that I kind of worked around because I came in late, the budget process had started, it was a sloppy process last year anyway. Which may have been the way it had always been, I
don’t know. So we got through. But this year we made a strong effort. We’ve got people from all areas within the [institution]. So there’s faculty on it, there’s staff. There’s administrative people. There's a student on it. And it’s a collaborative effort. The first phase of that was to work through the strategic plan and make sure what we’re focused on this year in terms of initiatives and spending.

Continuing to describe the process, the participant related that the final proposed budget package would then be presented to the cabinet, including the strategic initiatives. As CFO2 noted, “I know that we’re gonna be over in budget. So we’re gonna have to make some decisions. But we’re bringing people in besides the cabinet to talk about that and to make decisions and recommendations.” After the proposed budget had been reconciled regarding revenue and expense, it would then be presented to the board of trustees.

Given that the budget advisory committee had existed before the arrival of the participant, CFO2 was asked about their perception of the budget process. They replied that even though the budget advisory committee had been in existence previously, “given the environment it was a tops down budgets so there was very little participation.” They continued:

So I like the collaborative process. I’m not a big fan of budget advisory committees. [Institution’s] have lots of committees. But I get it. I understand why it's important and I do believe in a bottoms-up process. I’m not a fan of the tops down because then there’s no accountability. It’s your budget. It’s my budget. And that's not how it should work.
When asked how the participant described their role in guiding the financial matters of the institution, including budgeting decisions, they replied:

Well, I drive the process, so I lay out the foundation and I get people involved and what I did is that I broke it up into subcommittees. So there were two revenue groups and there was a capital expenditure group. And my jobs is to keep them on track and focused and push back when I think they’re not doing what they’re supposed to be doing. In the end, I deliver the reality. So first pass was you know, not good news. You guys got to go back at work. Think about this. Think about that.

CFO2 also described the way in which they encouraged the participants in the process to think in new and creative ways:

You know, let's not continue to use what we’ve done in the past. So that we can in fact get something we think makes sense for us. And maybe a stretch, so people can begin to say, ‘OK, you know I never really thought of it that way.’

When asked if they thought that higher education institutions had a tendency to operate in a siloed environment, CFO2 replied, “Oh yeah. Oh yeah.”

CFO2 described the way they handled tensions and conflicts when they occurred: Yeah. I hit things head on. There’s no tap dancing around it, if you delay it only gets worse. So get the people in the room that have to work on this, and come to a decision. Whatever has to be done. Delay is the worst thing.

**Relationship with the CAO.** The next portion of the interview involved the relationship between CFO2 and the CAO. The participant was forthcoming in their
answers, and described the relationship in terms that appeared to be genuine, positive, and substantive. As CFO2 described this component of their work:

For my relationship with [the CAO], it’s more on an expenditure side. With [them] it’s all programmatic and they want to do a lot of things. We’re working a little bit more closely that we did my first year. [They’re] not a financial type, and [they’re] used to one style. My style is to educate. To make sure [they] understand what [they’re] asking for.” “[They’re] really good. [They’re] challenging, cause [they] want a lot of things, and everything makes sense. You know, the problem for us is everything makes sense.

CFO2 also spoke of their support for the work of the CAO, and particularly significant aspects of that work related to strengthening the institution:

Introducing new programs because obviously we need to do something to get ourselves known. But it’s still ‘are we going to get that enrollment?’ So it’s still a little bit of risk, but I think we need to take some risk because the status quo is not going to work for us.

Continuing, the participant added, “And that’s my job, to say, ‘Hey, look, this is how much we have to spend. And what are the things that are really important to you?’” CFO2 stated that they believed they had a good working relationship with the CAO, in part because the personalities work well together. They also related that “Actually, this cabinet I think is surprisingly cooperative and collaborative.”

**Use of information in decision-making.** When asked about the role of information in their decision-making, CFO2 replied, “For me, accurate data is critical,
and right now we’re flying [blind].” The participant provided details about the challenges of having data to support decision-making at the school:

We use [higher education ERP system], which is the one of the more common ones. And… I guess they brought it in maybe 10 or 12 years ago and a lot of the functionality is not used. They use workarounds to get things done. We just went through a big audit [involving use of the ERP], I guess a year and a half ago, and the new CIO is working through all the issues right now.

The continued, “But the reporting here, I mean I thought [their previous institution] was bad. Getting information… everything is spreadsheet-driven here, which is scary.”

CFO2 also discussed the way the lack of information was directly impacting the work that needed to occur through several examples. “And we’re fund accounting, which we’re converting to gap, which is also a challenge for us.” The participant described the way in which this forced them to use information that had been developed from a number of sources that were not viewed as reliable or authoritative:

Well for us it would be really helpful if I could get system-generated information as opposed to these spreadsheets which just make me very nervous. And then you look from one sheet to the next and it’s there’s differences, and you say ‘oh my god, which one is right?’ What am I doing here? That’s the scary part. Cause we prefer to be data-driven in our decision-making, it’s just the data is shaky.

In another example, CFO2 described the way this was affecting the schools ability to do program review:

And [the president’s] pushing me… to get into the profitability of the programs. If the information is available, and you make the decision about how you want to
account for revenue, how you want to allocate expenses. Once you build that
model, it’s fine…. Cause people are tied to the past and until you can show them
through that P&L, basically, on an academic program, they’re gonna believe that
the… their program is “the” program, you can't afford to get rid of it.

When I asked whether the participant thought faculty would respond better to a
case based on evidence, they replied:

My sense of the faculty, at least when I meet with them, is that they’re financially
weak and you can tell them anything and they’re gonna believe it. So I don't
know that they’re data-driven when it comes to [financial decisions].

In the next portion of the interview, the CFO discussed the extent to which they
used both structured, more quantitative, and unstructured, more qualitative, information
in their decision-making:

I guess it depends on what it is we're talking about. I like the quantitative
approach better because it supports whatever decision you make a little bit better.
I mean it’s good to have good instincts but good instincts sometimes can backfire
on you. So, if I have quantitative analysis available that’s what I’m going to rely
on. Less on qualitative. Otherwise it’s a lot of discussion and then agreement,
consensus before you get into the qualitative.

When asked whether they gather information to guide decision-making in other ways, for
example by walking around the campus and looking, talking to constituents, the CFO
replied:

In spending money, yeah. There's a lot of that conversation, and we’re small so
it’s almost unavoidable. Certainly at the cabinet level I’m talking to those
[individuals], my peers there, and then the guys that report to me, the CIO and the facilities person where we spend a lot of money. That's a lot of walking around and talking. ‘Whata you got and show me what you’re talking about.’ And we’ll spend the money there. But yeah, it's a small enough group that it’s easy and preferable.

CFO2 made clear that they relied on this information significantly, but simultaneously noted that they had not previously considered this as information to guide decision-making.

When I asked about the Institutional Research function at the institution, the CFO noted the transition that had been occurring in that area at Institution-2. The previous director of institutional research (DIR) had moved to a new position, and another individual had assumed their responsibilities. This resulted in a very limited staff being responsible for both institutional research and assessment. When I asked about their use of the Office of Institutional Research in their work, CFO2 replied:

That one-person office? The person here is swamped with a couple of responsibilities. [They’re] new as the head of Institutional Research, and they also have some other responsibilities. So they’re really doing kind of two jobs. Wearing two hats.

The CFO stated they did not use Institutional Research as much in their current job as they had in their last job. But they were also very complimentary of the individual and the work they were doing:

If I could get [them], I would utilize [them]. And as we get into this program profitability I may have to draw on [their] capabilities. Bright person. I think
they’ve got a doctorate, not 100% sure. Maybe it’s just a master’s. But probably challenged between the two things. Smart, so I’m sure that over time it’ll work, and hopefully [they’ll] be some assistance to me and some of the things I need.

CFO2 also spoke to the question concerning information the institution may have sought to gather concerning the external environment including peer and aspirant institutions in order to help guide decision-making. The CFO reported that there was benchmarking, and that a group of comparative institutions had been selected. They stated that in the past different groups had been used as peer groups depending on the issue. “There’s an IPEDS peer group which I wasn’t even aware of until this year.” The participant also noted that the president was heavily involved in gathering information from outside sources, and bringing it back to the school for awareness and discussion.

Well, [the president’s] very aggressive in talking with other presidents. [They’ve] got a broad network also, so [they’re] always checking with other people to get information on how they do certain things. And that’s brought to the table in decision-making.

When CFO2 was asked if they considered this unstructured intelligence, they replied, “Right, right.”

CFO2 described the use of the AICUNJ (Association of Independent Colleges and Universities in New Jersey) network for gathering information to see what other schools and members of AICUNG do. They specifically mentioned the issue of employee turnover for example, and using benchmarks to investigate employee turnover. When
asked how they factored this kind of information into their decision-making, CFO2 stated:

I like to get it and see what it looks like. So do I count on it? Just helps me sometimes get perspective. That's the qualitative side, when you start thinking ‘what’s my gut telling me against what they’re telling me.’

The final issue raised with CFO2 was whether there was anything to add, or whether there was anything useful to know that I would not have known to ask. Their reply was:

No, it’s experience. I rely on what I’ve done, what I've seen, and what I know about the different things that are being introduced. So a lot of it is experience and data. I mean but basically, what else would you be doing that on? I’m not a high risk taker, but I am risk taker. And I like working with these guys cause I think there's huge opportunity in these small colleges, and some of the programs they’re introducing. And I’m a big supporter. I wish I had the data.

**Institution-2: Director of Institutional Research (designated DIR2).** DIR2 was relatively new to their position at Institution-2, in the range of 0-2 years. The information gathered through this interview largely reflected that already obtained from CAO2 and CFO2, and it was convergent with the accounts of both senior leaders.

In terms of professional background, DIR2 related their previous research experience which was significant. They confirmed that Institution-2 had sought to strengthen the IR function at the school in recent years. The participant stated that regarding their constituencies, they were “many and very varied.” DIR2 related that the primary sources of demand for their services were academics, the president, and the
board through the president. They also said they provided significant “ad hoc” services to deans, and also to faculty. With regard to faculty, the DIR noted that most of the information was provided without specific requests being made, as a way of increasing the faculty’s exposure to information deemed relevant and useful to them. DIR2 noted that external constituents also played a major part in the work of their office, including compliance reporting.

The participant explained that information was now playing a larger role in decision-making at Institution-2, and particularly in certain areas such as academics. A number of examples were provided in this regard that included the way the information provided by IR had resulted in specific changes. Among the examples were changes to summer bridge programs, new academic programs, and student retention.

It became evident through the interview that DIR2 understood the way in which the credibility of their office related to the way the information they produced was perceived. As they described this, “The messenger impacts how it is used.” The participant explained that they incorporated a number of considerations into their work including how to approach certain analyses, but also that timing was a primary focus. DIR2 described the way in which trends they detected in the data increased their sense of urgency to get the data into the hands of those who needed to see it. The participant described this as “getting ahead of the curve.” They noted that IR offices could sometimes be “very reactive,” and that it was their intention to be much more proactive in this regard.

Although DIR2 stated that much of the information they produced was quantitative in nature, they also said one of the most important services they provided
was to “take quantitative data and provide it more in context.” They described this as “bringing meaning to the data.” The DIR said that they personally found it “hard to think both quantitatively and creatively” at times.

With regard to institutional context, the participant stated that significant change was underway at Institution-2. They went on to say that the information now being requested was putting significant burden on their office to keep up. They noted that their office was responsible for both IR as well as assessment. Among the most important areas they were currently involved in was said to be research concerning “perceptions of the faculty.” In this area, DIR2 said that they “picked the tool that best fits” the work they are doing. They observed that this was an example of the value of both quantitative and qualitative research and information. When asked if the participant placed more weight on structured or unstructured information, they stated it was their belief that both were important. Again returning to the work they were doing concerning faculty perceptions, DIR2 said that in approaching questions that needed to be answered, they “open the toolbox to see what you have” in finding the best ways to address the questions.

When asked about the relationship between IR and different areas of the institution, DIR2 spoke in a very complimentary way toward CAO2. They noted that the CAO was “very skilled at pulling triggers and making decisions” that needed to be made. They also described the CAO as placing high value on data to guide decision-making, but also willing to move forward with the information available when necessary. DIR2 said that CAO2 was willing to assume the risk for decisions, and also to deal with what happened next including changing course if necessary. DIR2 said that it was their belief
that CAO2 was making “really, really good decisions.” They also observed that making good decisions was “hard” and that it often involved “putting the cake in the oven and watching it.”

In closing, DIR2 stated that it was their desire to play a larger strategic role in the direction of Institution-2. But they also said that with the volume of work and requests their office was dealing with, this would be very hard to do without additional resources.

**Institution-3: Chief Academic Officer (designated CAO3).** Due to the concerns expressed by CAO-3, this interview was not digitally recorded. The answers and comments were recorded by handwritten notes during the interview with the participant in real-time.

CAO3 had arrived at the institution in the category of 0-2 years previously. The individual had worked previously in higher education before coming to Institution-3. CAO3 had agreed to the interview after considerable interaction via email. The last email from them had been very positive and suggested they were excited about the interview and the chance to talk with me. However, when I arrived it was clear that they were conflicted and had reservations about participating.

Prior to the interview CAO3 had expressed their concern that the study was for a different purpose, and that the results could be somehow used in a way other than the stated purpose. At their request, I had provided significant information as to my identity, my place of work, the IRB forms concerning privacy and confidentiality developed for this research, and even offered the opportunity to speak with the chair of my dissertation committee. Nevertheless, while the individual agreed to carry through with the interview, their initial level of reticence was apparent. This said, once the interview was
begun, they did not appear to withhold significant information. I would also note that this individual did seem to care for their institution, and particularly for the students at the school.

_Institutional tensions and change._ CAO3 spoke to a number of tensions and conflicts at the institution. The liberal arts mission and tradition of the institution was clearly affirmed, and the participant stated that this played a large part in their decision-making. CAO3 also stated that the faculty at the institution were concerned with changes at the school. The faculty wanted to maintain the liberal arts focus because students are trained to be thinkers and intellectuals. The participant noted that they also believed students needed to be trained to be adaptable, to be able figure things out, to think. As they stated, a large part of this was teaching them how to think. As CAO3 related, “We are trying to give them options that their families never had. We want to give them a broad-based foundation.”

CAO3 also spoke to the fact that student demographics had changed considerably. As they reported, “We do serve a different kind of students here, including underprivileged. The participant went on to say that, “We have 30 students here at [Institution-3] who were homeless.”

Retention was discussed as a serious problem at the school. The participant noted, “That is a matter of public record.” CAO3 described enrollment for the past three to five years as having been “very strong, and we are looking for the same this year.” However, they repeated that retention was a continuing problem. The participant observed that there were three groups of students who comprised retention problems: those who can transfer and do, those who can’t transfer and don’t, and some who just drop out. When asked if
the institution was trying to make up for retention problems by adding transfer students, they stated that this was the case.

When CAO3 was asked if *U.S.* *News* rankings represented an issue for the institution, their answer was somewhat surprising. The participant stated that it was an important consideration for the school. They related that Institution-3 is not the first choice for most students. This was also said to be something the school was working to overcome. The CAO stated that there was a desire to have the school seen as a destination school where more students would want to enroll and stay.

The other tension reported by CAO3 was the way in which they had to address the concerns of parents and students about the value of a liberal arts education. They stated that return on investment (ROI) “is the issue.” The participant described ways in which they had to sell the value of a liberal arts education to students and their parents. CAO3 said that parents are becoming focused on outcomes. “They want a thing. They find it hard to understand that a degree is not related to a thing.” The participant was somewhat rambling in their comments at this point, adding that “It is a tragedy when a 6th year student is failing, so the student is being cheated in their education.” They then said, “I believe students should have the opportunities to use the talents and abilities they have. But the convention is that the outcome of college is a high paying job.”

**Academic response.** CAO3 stated that the institution had been slow to develop new programs, but that “we now have several new ones.” These included three new master’s programs. It was relatively clear through their comments that CAO3 saw it as their role to protect the liberal arts core of the institution, particularly undergraduate programs. While discussing changes in academics at the institution, the participant stated
that “We are looking to innovate.” However, all examples provide by the participant pointed to academic program changes that were occurring at the graduate level, and that there were few changes occurring in the area of undergraduate academics. As CAO3 stated in response to a question along these lines, “My role is to support the liberal arts mission, and not change the institution. Also to clarify the mission to others.”

The CAO addressed the internal institutional context for changes at the institution. As the conversation proceeded the participant said, “Faculty are concerned about these changes and new programs, and what they mean for the school.” As we discussed the possible changes that were being considered at Institution-3 in the area of academics, CAO3 again spoke primarily of changes on the graduate side. When asked whether program reviews were part of the discussion the participant responded, “The real rub is that the college has been slow to implement program review. It is in its infancy here.” Then added, “There is not currently a decision-making body to deal with something like this.” At another point the participant stated, “We are approaching a new gen-ed review at [Institution-3], by asking the question of what students should know.”

When asked whether there had been any key changes or outcomes that the school had sought in recent years, they answered:

Retention. We want [Institution-3] to be a destination school rather than just a starting point for transfers. We are not the first choice for most students, but we want to make [Institution-3] a place they want to be. We have mostly commuters, but we have new residence halls. In many cases, not living on campus is because of financial reasons.
Leadership style / decision-making. When asked if they could speak about their constituents and the role they played in their decision-making, CAO3 answered: “Students, families, the state, Middle States, employees – not just faculty.” It was not surprising that the participant had listed students as their first constituency. Their compassion for the students at the institution had already surfaced during the interview through their words and the way in which they spoke about the students. This was particularly true for students who they described as underprivileged.

It seemed interesting within the context of the interview that although CAO3 had indicated they were quite deferential to the faculty and their views, they had listed faculty last when describing constituents. This was done in a somewhat conflicted and almost defensive way in the context of the conversation. It had become clear throughout the interview that CAO3 was trying to cautiously navigate the tensions and conflicts at the institution with an understanding that while helping the institution survive was a priority, so was their own professional survival in their role as CAO. This conflict in the participant was apparent.

The information provided by CAO3 concerning their role in leadership and decision-making at Institution-3 was informative. The participant stated that, “my role is to be collaborative with the faculty, and to talk through decisions.” They subsequently noted, “I am not an axe swinger.” CAO3 said, “My role is also to use the budget well.” A little later, the participant said, “We have a mixed bag of faculty and adjuncts, it’s not just by liberal arts. I am continually looking where to allocate, and reallocate faculty vacancies.”
When asked about shared governance at Institution-3, the participant stated that it was “elaborate” and that it “was here before I came.” When asked about the way in which faculty interacted with the office of the CAO, CAO3 related that, “The previous [CAO] was unilateral. Faculty now are mixed. Appreciative, selfish, suspicious.”

The role of the board and the alumni in the future direction of the institution was also explored during the interview. “The board is very concerned about retention, including from a financial perspective.” CAO3 went on to say:

- Alums are a mixed bag at [Institution-3], some are very active, many are not.
- Those who are want to keep the school strong. The school has changed a great deal since most of them were in school. Most young alums are not very active.

The participant also noted that several current students were members of the board.

When asked how CAO3 navigated tensions and conflicts in their role, the answer was: “I try to serve as an example of peace making. It’s OK to disagree, but let’s find a way to not be destructive.” The participant added subsequently, “I approach conflicts head-on by surfacing them so they can be dealt with.”

**Relationship with the CFO.** CAO3 stated that the CFO at the school, “Is my counterpart and we work closely together. For example, [they] do a final read on grants. The CFO is also the Title IX coordinator.” The participant noted that it was their belief that because the institution had faced severe budget problems some years previously, “The president hired the current CFO to be a ‘watch person’ to keep us away from returning to that.” After a moment, CAO3 stated, “We both want what’s best for the institution. We have to find middle ground.”
Use of information in decision-making. The responses provided by CAO3 regarding the use of information to support their decision-making proved interesting. During this part of the interview, it became apparent that formal information was not a paramount concern for the participant concerning decisions. CAO3 stated that, “I do some walking around, but mostly meetings with the president and with students. I do a lot of listening.” When asked if they could provide any examples of data or reports that were also used, the participant related that they did look at “surveys, benchmarking, new career opportunities.” Then added, “I am currently assessing the information needed to support decision-making.”

When CAO3 was asked if they viewed quantitative / structured information or qualitative / unstructured information differently in terms of decision-making, or whether they placed more weight on one or the other, they replied: “I weight both unstructured and structured the same. I use outside for numbers, including consultants.” Interestingly, when CAO3 was asked to describe the institutional research operation at the institution, they answered, “We don’t have an institutional research office.” The participant stated that there was only one person at the institution doing anything like this and that they worked in another division. I later confirmed through multiple means that this statement was factually incorrect. There was indeed a director of institutional research at Institution-3. Later this individual was interviewed for this study. When asked about the ERP system at the school, the participant answered, “We use Blackboard Colleague which is a real nightmare.” Of note is that Blackboard Colleague is not the name of an ERP used in higher education.
As a final question, CAO3 was asked if there were any tools or information they would find helpful that they currently did not have. “Having numbers, especially reliable numbers. Feedback from students that helps answer the question, are we being successful?”

**Institution-3: Chief Financial Officer (designated CFO3).** The chief financial officer at Institution-3 (CAO3) had arrived at the institution in the category of 3-5 years previously. The individual has substantial experience in budget, finance, and administration, including in higher education. The participant related a personal experience later in the interview that provided insight into their appreciation for the benefits of a liberal arts education. “I almost flunked out of college. I went to a high school in [city] and I was totally unprepared for college. I don’t think I wrote one research paper in high school. Like how do you do that? How do you really study? I had no idea.”

**Institutional tensions and change.** The interview began with a discussion of the context of Institution-3, including tensions, conflicts, and changes. In speaking to the way that the liberal arts mission and tradition of the school impacts decision-making, particularly in the face of the financial challenges the institution is facing, CFO3 stated:

Notwithstanding the fact that we offer a number of professional degree programs or pre-professional programs, [Institution-3] still has an identification as a liberal arts college. And has a general education program that is very strongly oriented toward the liberal arts. In other words, there is the belief in a student having first of all, a good grounding in [the liberal arts].
The participant went on to explain that the school has a very significant liberal arts core.

So I think it’s mission, it’s the perception, and the background of the institution. No one at [Institution-3] says ‘oh, you know, the market has changed, we need to do this, we need to weaken the…’ That’s never a discussion.

CFO3 described the way that they attended every faculty meeting, many committee meetings, and every cabinet meeting so that they had a wide perspective on the institution. “That [liberal arts mission] remains true today as it has for many decades.”

The participant continued in their discussion of the relationship of mission to finances by adding, “Now combined with that is the reality of who our students are. 80% of our students are Pell eligible. By and large our students are first generation, and fairly poor.” CFO3 stated that it could be argued that since they are dealing with students of this nature, they should find another way of doing business.

Notwithstanding who we’re serving, the push or the continued importance of the liberal arts for students to become educated in terms of basic skills, to become good citizens, to be exposed to different things, is very much what the [institution] is all about.

The participant commented that the institution doesn’t have very many liberal arts majors, unless the sciences and social sciences are included, and that increasingly students are not majoring in the liberal arts. “Our faculty is very cognizant of career need.”

The CFO went on to state that Institution-3 had cooperative programs with other institutions in a number of areas, “and we’ve had some real success stories here of
students going on to get masters and PhDs in the sciences.” The way programs are structured at the institution, “if someone is in English, it could be broadcast journalism, it could be writing, if it’s in sociology they may have a concentration in criminal justice.” COF3 related that the institution was very cognizant of the students’ need to get internships as well.

From the interview, it became evident that CFO3 had a broad understanding of the landscape in higher education and had given thought to the challenges facing liberal arts institutions. “By and large when you go to many small private colleges, they characterize themselves as liberal arts colleges.” But, they added, it was often “sort of a euphemism of a small intimate setting, non-public setting, where students are going to be getting everything [corresponding to a liberal arts education], along with individualized attention and to be part of a smaller, collegial institution.” Then they added, “It’s sort of a dying breed.”

CFO3 spoke to the current environment concerning change within Institution-3. The participant said, “I think we’re probably going to be doing some more in graduate education, but it’s really been a sort of singular focus in helping first-generation students succeed.” They went on to observe that even schools that are not diversifying their majors very much have more of a career focus. “What do employers really look for? It’s still the same. Communications, thinking outside the box, leadership.” As CFO3 stated concerning the move to more career-oriented programs while maintaining a liberal arts focus, “OK, I can live with that personally.”

When asked about specific tensions and conflicts at the institution, the participant stated that it was fair to say there were significant tensions. “I think it revolves around a
couple of things. One is that faculty feel that we don’t have enough full-time faculty.”
CFO3 related that this played out in ways that were very troubling concerning trying to
move the institution forward. The typical response of faculty was said to be, “You want
to start a new program in X, Y, Z, we’re already stretched thin, are you just gonna bring
in all these adjuncts to teach it? You know, we don’t think that’s the right thing to do.”
The CFO continued, “I think quite frankly they think they’re underpaid. I just did a chart
for the president. So compared to the state colleges they’re tremendously overpaid.
Compared to other private colleges, we’re right in the mix.” Nevertheless, they noted,
faculty were prone to say “we’re underpaid and overworked, you know we just can’t see
moving into these new directions.” CFO3 said that they thought the view of many
faculty was “why should I put out?”

The participant also reported that the institution had dedicated substantial
resources to academic support services. “We also spend huge amounts of money on
tutoring and supplemental education services for our students. We spend like a million
dollars a year, which is a huge amount of money for us.” The participant listed a range of
support functions, and provided a surprisingly high figure for the number of people
employed in these functions at the institution.

CFO3 stated that there were other tensions and conflicts at Institution-3 as well.
“I think there’s also a resistance to change.” They added, “There’s also a longstanding
mistrust of the administration.” The participant stated that the institution had seen two
“near-death experiences” before their arrival, and before the current president. “They
were running low on enrollment so they admitted everybody and then a lot of people
couldn’t handle it so they really tarnished the school’s reputation. Retention problems.”
The CFO noted that faculty had developed skepticism regarding the administration.

“You know, saying, ‘well, you know, we’re not necessarily gonna do what they want us to do.’”

CFO3 described the relatively recent arrival of a new [CAO] and what transpired since that time. “So I think it’s fair to say that [they’ve] been making some progress.” But the CFO was also clear in expressing frustrations over the pace of change. They related accounts of attempting to move forward with external consultants concerning new program development. “And the academic person reviewed it with the faculty council, and they rejected it.” Again, distrust was said to be a factor. “‘You know, you’re just looking to cut majors.’ In other words, ‘you know, you’re just looking to cut some jobs.’” CFO3 said, “I think that was almost emblematic of this tension that occurs.”

They also recounted starting a traditional, on-campus graduate program that had done modestly well. But as the CFO said:

So when I talk to some of these [consultants] and I use the [name] program as an example, they would say ‘is it online?’ No. ‘Then it’s not going to succeed. There is no point of having a [name] graduate program in the current market that’s not online. Cause that’s not what people are looking for.’

The participant spoke of the approach by institutional leadership in general being “relatively low key” and using a “a light touch” with faculty. They described this as being “reluctant to push” for fear of “the blowup.” Rather than moving forward with a sense of urgency to address the institutions’ daunting challenges, the CFO described this approach as “whatever happens, happens.” At the same time, they noted that they understood this:
You know, it’s sort of like the situation with North Korea. While the Obama administration had a relatively light touch, now the Trump administration has a heavy touch. And I’m not saying it was good or bad, I’m not getting into politics here. I’m just looking at it from an analytical point of view. So now they’ve come in with a heavy touch. The risk there is that we end up starting a war.

When asked what role shared governance played at the institution, the participant replied: I would say governance here is separate governance. In other words, it’s not really shared to the extent that it could be. The faculty certainly has their roles and responsibility, and the administration has their roles and responsibility, but we don’t necessary share it more than… I think that there’s parallel play.

CFO3 described the faculty as being “very dug in.” There had been discussion at the institution within the administration of trying to build better shared governance, but it had not moved forward in part because of concern over the situation becoming even more adversarial. In their words:

So it’s like… Like a pet snake, or something like that. And you know, you get bit too many times… Again, you do the best you can. You take on the issues that you can take on but in terms of these [difficult issues]…

They described it as the administration and the faculty being in different places. “We kind of meet sometimes. But we’re on different wavelengths.”

In response to a question of whether there were key outcomes or changes that the institution had sought in the last two to three years the participant answered, “Well I think certainly the biggest one is retention.” The CFO related that a retention task force had been created to develop strategies to increase student retention. “If you look at the six-
year graduation rate, we’ve not moved the needle. If you look at the last couple of years, and year-to-year retention, we’re making a little bit of progress.” They noted that a number of steps had been implemented including more summer programs, mentorship programs, a freshmen seminar, and the reorganization of support programs. “So there’s a lot more effort, they’ve got this networking program we do, revamping the first year curriculum, continue to focus in on that first semester now.” The CFO described the way in which, for many students at the school:

It’s almost like a bad dream. In other words, you went to a high school in Newark, and you want to succeed, you have a 2.8 average in high school. ‘Well, you know, I did OK.’ And then they get to college and they find out that that 2.8 was phony. They got the 2.8 because they just showed up every day. They weren’t prepared. It’s well documented, this huge gap for many students between high school and college.

CFO3 went on to note one aspect of the institution where information had been developed by Institutional Research that showed while retention and graduate rate were both problems at the school, students who had started their studies at Institution-3 had a very good record of ultimately finishing college, with over 50% having done so. Referencing the population of students the school was serving, the CFO said, “That ain’t bad.”

After a moment, CFO3 said, “But you know we have our successes. We’ve been here [over 100] years, you know. Our budget situation is tight, we’re still educating students, we have our successes. We’re still in the game.” Then they went on to describe an example that had apparently moved them personally:
There was a student at the last scholarship dinner who came here. Homeless. We have students who are homeless here. We have students who are food deprived. Nonetheless this guy, was I think a junior. He was making it. Somebody who was homeless and did very poorly in high school.

They then added:

So is everything perfect? Are we perfectly positioned for the future? No, we’re not. But it’s not a bad lineup. A lot of great faculty. You look at our fact book, they went to Columbia, they went to Rutgers, they went to a lot of really good schools. You go to the faculty meeting and you hear them talking about their programs. They know what they’re talking about. The faculty continue to hire good people. We’ve gotta really good faculty—... I was... I got a really good factoid for the fact book last year. I was curious, cause our graduation rate is like in the mid-30s, our six-year graduation rate. Not unusual for our population. In fact, if you use the UCLA regression model that predicts graduation, totally based on exogenous factors, we routinely beat that. Uh, but nevertheless it’s low.

Through the Clearinghouse we’re able to get access to what happens to people after they leave [Institution-3]. So I found out that if you look at our entering class of 2006, in 2016, ten years later, 56% of those people have graduated college somewhere.

Financial response. CFO3 described a number of things underway aimed at putting Institution-3 in a better financial position, as well as the urgency associated with these changes:
Let’s put it this way. As I sit now at [Institution-3], is that given our finances there are a number of things that we desperately need to do now. Like the house is on fire. And it’s been very hard to move those along. Very hard.

When asked to describe the current state of financial health at the schools, the CFO replied:

Well to give you the broad brush, we’ve been having trouble growing net tuition revenue. So our net tuition revenue is relatively flat over the last four years. But expenses keep going up, there’s the faculty, their benefits, blah, blah, blah. So in each of the last four years we’ve had to cut the budget. We may or may not have to cut the budget next year, so we’re in the same ballgame as many other small private institutions, having trouble.

The participant went on to state that Institution-3 was maintaining enrollment. “I mean we had a bit of a dip there for a while and then leveled out.” They related that there had been trouble growing the revenue line, but that the school had tried to make investments in key areas. One of those areas was retention. “So we may again have to cut the budget, which is a demoralizing factor, and we’re not well funded to begin with.”

CFO3 stated that steps had already been taken to cut costs. Those included non-academic program and service reductions, as well as staff reductions and reductions-in-force (RIFs). Some of these had been subject to unintended consequences, the participant said, producing yet other problems, both operational and financial in nature. “So I think we’re at that point where unless we start doing more out of the box, we may have to outsource facilities. Not something I wanted to do, people have worked here for years, they’re devoted, they’re loyal.”
CFO3 was asked if they could provide examples of things they believed the school needed to do to confront the tensions and challenges the school faced. They replied with examples that primarily involved changes that would provide greater efficiency in the area of academics including programs. The participant said there was a need to do optimization of courses, but they knew it would be perceived very negatively by the faculty. “So we have faculty members here, no fault of their own, [who] teach a very few students. I think that’s an enormous problem.” The participant stated there were too many departments, and academics needed to be reorganized, as well. “And we have a lot of majors that are teaching relatively few students.” The school had almost no full time faculty teaching first year courses. “Almost no first year courses. So we said here's a place where people drop out in the first year, and they’re not getting [taught].” They reported that the CAO had commented, “You know, so we don’t know if we can get people to teach the upper division courses.” To which they said they had replied, “A legitimate question. Have we looked?”

The CFO stated that they had done “countless analyses” concerning similar issues at Institution-3. They related how a potential partner had approached the school with the proposal to offer professional programs on their campus and split the revenue with Institution-3. “And I said, what a great idea.” They continued, “So then I said to the [CAO], when’s the next meeting? ‘We’re not going with it.’ I said you’re not gonna explore it? Really? I said it’s a great idea, it’s worth getting into it a little further.” They described their view of why such needed changed had receive no support:

Because right, they haven’t felt any pain. They got their increases, things are moving along. Life is… you know, they’re still teaching their Tuesday Thursday.
You know, it ain’t a bad career. You know, if you’re teaching 50 students a semester, and you’re coming in two days a week. So even if you have a lot of students, you can grade the papers at home. It’s not bad. You don’t have to battle the traffic.

The participant then added, “So I think there’s sort of a bit of gridlock here in terms of looking at those key issues.”

CFO3 related that they personally knew many institutions that were facing exactly what Institution-3 was facing. “And they’re having the exact same problem. They can’t grow net tuition revenue. So they’re just giving out more and more aid to keep their enrollment, some actually have been running a deficit.” When asked if Institution-3 had been running a deficit, the CFO replied:

Well, no. Because we have like $[number]M in the bank. I mean we have the endowment, but we’re not gonna take that out. We’re not touching the endowment. And we haven’t touched faculty, we’ve kept the faculty. All the programs have been kept intact.

The participant continued by saying:

But they keep continuing to offer more and more sections, so we say to the [CAO], you know, you’ve got to control that. And they’re like ‘why?’ And, well why do you keep ordering more sections for the same number of students? Oh, does anyone ever eliminate a course? No. Every semester, there’s more and more courses, cause I want to teach my course. I got a PhD.

In summary, CFO3 explained:
So I think we’re certainly holding our own, but it’s gonna become increasingly difficult. We’re not sustainable at this point. We’re definitely not sustainable. If you project out revenue expense over the next five years, you’re seeing a big red number. Because expenses just keep going up, and if revenue goes up flat or goes up 1%, it’s not covering.

*Leadership style / decision-making.* With regard to their constituents, the CFO said, “Well, certainly one constituency that I have is the president and the cabinet.” They explained that the president of the school was very collegial, and that every major discussion and decision goes before cabinet to be vetted and “basically only moves forward if there is a consensus.” They noted that a second constituent group was their own direct reports and staff. “So similarly I value their input.” CFO3 then said, “Then I think, certainly the faculty is a consistency.” But they added that it was not the practice at Institution-3 to discuss budget policy with faculty.

I think that’s a bit of a handicap because I’ve worked at other places where there are faculty committees where they’re talking about budget and finances and other key issues. And at least you could find out what they were thinking. We don't really do that here.

The participant went into some detail to discuss their own awareness that institutional leaders, “they all have their strengths.” They continued, “And they haven’t really balanced out their view of the world, and the knowledge base.” They spoke of this in the context that it was easy for individuals to miss important things by looking at issues through their own lenses. As they described it:
So you have these people who are not balanced and they’re not using their staffs, or not acquiring the information so that they don’t have this robust view of what’s happening politically, what’s happening to my people, are they motivated, what’s the business model, whatever.

Then they noted that sometimes, “the things that are really going to help us aren’t under my control.” They referenced a recent article discussing the idea that “your chief academic officer is really your chief marketing officer.” Continuing, the added:

But if you don’t understand any of this… I mean the world has changed dramatically. I refer to those happy days in higher ed where you raise tuition 5%, your expenses go up 4, and you had 1% to invest in new programs. Now it’s just the opposite. Your expenses go up 3, you have 1, and you have to cut 2. How long can you do that? Without rethinking something.

**Relationship with the CAO.** When asked about their relationship with the CAO as their counterpart in many decisions, CFO3 was forthcoming yet essentially neutral and appeared almost clinical in their responses. “Well I think one of the things we created when the new person arrived almost [number] years ago, was an [enrollment committee].” They listed the members of the committee. Then added:

So a tremendous interaction about [that]. And then ultimately we created a new financial plan. A financial sustainability plan. So a tremendous amount of interaction with all these people including the CAO about where we can tweak the program, and make improvements to basically help the bottom line. You know, what were the opportunities that were out there that were resonating with the faculty.
Concerning changes related to academics at Institution-3 the participant stated, “That’s sort of the litmus test here. It almost has to be perceived as coming from the faculty.” CFO3 then described a group of senior administrators as the key forum for discussion and planning involving many things including administrative issues, personnel matters, finances and financial sustainability, and others. It was telling that given the question, the participant actually brought three other colleagues into the answer and did not address the CAO specifically.

With regard to their interactions with the CAO on important issues, CFO3 said:
We certainly have the interactions, but I think given the nature of the faculty, they’ve been reluctant. So one thing that we’ve put on the table, is we need to desperately look at the curriculum. You know, we continue to offer more and more courses for the same number of students. And then students are also complaining that we’re not offering the right courses to graduate. We need to look at our majors, we’re probably doing too much. Our curriculum, our gen-ed curriculum, is way too complicated. So we’ll put that on the table, and they’ll just go ‘LOL, you know, like that’s not gonna happen.’

When asked whether Institution-3 had done program review from a financial perspective, the participant replied, “We did at one time with the predecessor of the current person and that whole concept was rejected. Not by faculty, by the [CAO].”

CFO3 stated in referring to the CAO, “I think that [they’ve] found that [they’ve] got to pick [their] battles.” The participant related a situation in which, Faculty kept saying ‘we don’t have enough classrooms, we don’t have enough classrooms.’ And we said, that can’t be true. So we brought in an outside party
to do this whole space utilization study and we found that the vast majority of the classes were offered between 10 and 2. And we had acres of [classrooms].

Continuing to discuss changes implemented under the current CAO. “The freshmen seminar. SAT optional. They’ve done a lot of stuff in [the time the CAO had been at the school].” Then added in referencing their perception of the CAO’s position, “But I can’t do everything at the same time.” CFO3 then said, “I suspect somewhat wisely [the CAO] said “OK, I’ve prioritized things.”

**Use of information in decision-making.** When asked about their use of information in decision-making, CFO3 said “I’m very data driven.” When the nature of information within the business intelligence framework as both structured and unstructured was noted, and CFO3 was asked whether they used both and if so to what extent, the participant replied:

I mean I happen to be a proponent of both. In other words, I think that from my perspective first and foremost I’m looking for hard data. Can’t always find hard data. So for me, a good companion for hard data is qualitative research.

CFO3 then described a case in which they had used both:

So we were just looking at some student service issues. Do we make further reorganizations to one-stop shop. So we did some student interviews. In other words, you know, qualitative data. We couldn’t peer into the minds of [number] students, but if we got together two or three focus groups… I mean my theory is that if you talk to enough people about a topic, more likely than not you’re getting a good sense as to what’s going on. Even if you can’t put a number on it.

The participant then returned to the student retention issue for another example.
I think one of the things that annoys me about this place is that even though we’ve got some really great numbers as to who’s leaving and where, we don’t really have a good thesis. A good qualitative notion of why people are leaving. Which I think can easily be obtained because the patterns emerge. Sometimes patterns don’t emerge. You ask ten people and you have ten different answers. Well, yeah, but if you ask 10, 20, 30, 50 people [the patterns emerge].

The CFO also described the way they had conducted research internally aimed at finding answers to key questions:

And when I go back to the UCLA or other research, the sad fact is, that if you come to an institution and you’re a person of color, and your family has a $25,000 year income, your likelihood of success is not there. What we’ve now honed in on is the bolus of students who arrive in semester number one, and just bomb out, we found out that if you don’t get a 2.5 or above in your first semester, you ain’t graduating. You have only a 4% likelihood of graduating.

When asked if they could provide more detail concerning to how this effort had evolved, they replied, “Well, I saw an article in Inside Higher Ed that it was true nationally, and then we did it here and we replicated the national findings.” They added:

And we’ve not done a good job of developing, say, the retention thesis. I think we’re starting to develop it. You know, you’ve got this group of people that bombs out of the first semester, and then you’ve got another group of people that think we’re really crappy and they go to a better institution. And then there’s another group of people that run out of money, and whatever. But we don’t always have that qualitative piece.
During the interview, CFO3 was asked about the Institutional Research office at Institution-3. The participant stated that they had increasingly been using “our Institutional Research department of one person.” They noted that the institutional researcher had been important in developing the information concerning the school moving to a SAT optional policy concerning admissions.

In other words, we thoroughly analyzed that. Did the data, built on research that we had already done, worked with the faculty enrollment committee, and basically said this is the direction we need to move in. It was presented, and I think it was sold, again, as I mentioned by the president. You know, based on data.

When asked their perception of the IR office and their level of satisfaction with the job they were doing, CFO3 stated that they were “Pretty well satisfied.” “[They] know the data. I mean [they have] to be pushed sometimes, but [they know] the data.” The CFO also noted that they have found the DIR helpful in finding a way to “get at” things in terms of helping formulate questions and finding ways to get data. The participant stated that the institution had not done a significant amount of work gathering information on the external environment. “Unfortunately, there’s so many surveys that you have to fill out, you know, probably half [their] time is spent just doing the Petersons, IPEDS is a bear, stuff like that.” They noted that IR needed more resources. Then added:

But I think increasingly we’re definitely getting more data and using it to our advantage. You know, we’re starting a new initiative in terms of trying to teach
people more how to use the report writer on campus so they're not always requesting data so they become more data [self-reliant].

The interview with CFO3 had been scheduled for one hour, but the participant had held their schedule open afterward. They related that they viewed this type of study as very important, and that they had helped other researchers in similar ways whenever possible. At this point the interview was running nearly 90 minutes in length but had proven very useful in producing valuable information from a working CFO. It was therefore not altogether surprising when the participant was asked if they had anything else they would like to add that had not been covered. The answers in this part of the discussion seemed no less reflective on their part. They began by saying:

For a smaller college or a small university, it really comes down to the president. And the last three places I worked, the presidents were smart and everything, they were well educated, they were skilled. But they didn’t seem to place a value… In other words, they couldn’t look at the college or university as a business enterprise. Cause that’s what I think it takes.

CFO3 went on to say that it was the nature of people to look at things through the lenses of their own training and experience. Citing the example of one president they had worked with, the participant noted, “So [they’re] always looking for regulatory problems, or political… [They’re] very good on the politics.” Similarly, CFO3 noted that it was common for the leaders of institutions to look at the school “as an academic enterprise.” They noted that from their perspective this was simultaneously justified, but wholly inadequate. The participant added that this was a conflict in trying to make people understand the financial threats to the institution. They noted that there had to be
an attention not only to the present, but to the future. “So I’ll say things like we’re not sustainable, and I’ll be told, well, I’m not sure if I agree with your pessimistic view of the future.” As they noted again, there seemed to be a lack of understanding of the problem and no sense of urgency to address it.

The CFO also described their view that one of the top three factors driving higher education is “the size of the cohort.” They explained this as a diminishing supply of students available to feed the enrollment of existing institutions:

So that for many years when that cohort was rising, particularly with the Baby Boom echo, you could be somewhat not cognizant of that because you had a franchise. It’s not easy to get licensed as a college. And you develop a niche and a franchise. So you could exist and many places existed, without being cognizant of that for many, many years, because there were plenty of students to go around. They noted that this was one of the things that “economic theorists talk about, or even business theorists.” In other words, “sort of the mature market.”

CFO3 likened the current relationship between colleges and the availability of prospective students with personal computers as they had developed. “In other words, you have growth or plenty of room for different actors. But then maybe the product…well PCs are a really good example. It matured. You know you had explosive growth, it became mature, and then commodified.” They went on to emphasize that it was their conviction that higher education was facing a very mature market with declining cohorts of potential students. With regard to Institution-3, they stated:
So basically what people are not totally perceiving, or at least the people here, is the level of competition is changing behaviors. So now, we compete against privates and publics. We’re in this deflation era spiral of less and less students. Then concluded, “Because it’s this competitive environment, and all the gloves are off. People are doing whatever it takes.”

**Institution-3: Director of Institutional Research (designated DIR3).** DIR3 was not new to their position at Institution-3, having been in the position for a range of 5 or more years. As previously noted, the information provided by CAO3 and CFO3 was dissonant / divergent in many regards, including institutional research at the institution. As a result, it was expected that the information provided by DIR3 would necessarily be non-convergent with that already obtained from one or both of the senior leaders.

DIR3 related their previous experience which was significant in duration. They confirmed that there had been significant changes in IR at Institution-3 over a period of time, but did not describe this as intentional with regard to institutional leadership. Most of the changes that had occurred were described to be the result of normal personnel changes including individuals leaving the institution for other opportunities.

When asked about changes at Institution-3 in which the information provided by IR had played a part, DIR3 described building projects at the school, as well as new technologies and systems that had been acquired. When asked about academic changes that IR had been involved in, DIR3 replied “I can’t think of anything.” When asked if they were aware of changes in academics at the school over recent years, the participant related that some changes had occurred in graduate programs, non-credit programs, enrollment levels, and that they believed one program may have been eliminated at some
point. DIR3 then added that improving student retention had been an important focus of the institution for quite some time. When asked if they believe information provided by IR had played a role in changes in the area of academics at Institution-3, DIR3 provided no direct response to the question.

With regard to their constituents to whom they provided information and services, the participant stated that their office received requests from all areas of the institution including many of the senior officers. They stated that much of the work occurring in their office was related to meeting compliance reporting requirements, as well as producing the fact book. Some information was also said to be produced for faculty. When asked if they believed that the information produced by IR played a significant role in decision-making at the institution, DIR3 said that the information produced was “considerable and important” and that they “hoped it was looked at.” Interestingly, the participant stated that over the last two to three years, their office was spending significantly more time in two general areas: grants and retention rates.

DIR3 said that the majority of the information provided by their office was quantitative in nature. They stated that little was done with regard to research concerning the external environment, including peers and competitors. Then added, “we do a little more looking at competitors lately.” The one area where DIR3 reported some work being done outside Institution-3 was in looking at where students who had left the school had gone. In closing, DIR3 stated that although their office was responsible for both assessment and IR, significantly less work had been done regarding assessment in recent years.
Institution-4: Chief Academic Officer (designated CAO4). The chief academic officer at Institution-4 (CAO4) had assumed their position in the category of 3-5 years previously. It became evident that CAO4 had significant knowledge and understanding not only about Institution-4, but also about the current higher education environment. At one point during the interview, I observed that perhaps they were speaking in a way that perhaps they would not have spoken 10 or 15 years before. To this they replied:

No, I don’t think so. I really don’t think so. I’m seeing a totally different side…

You know, I started off my life in academics in an administrative role, and I knew I had the ability to do it, I just really wanted to do the faculty thing, and it was just a blissfully peaceful life compared to what I’ve got now.

They went on to say that they were probably currently working 18 to 20 hours a day, adding:

But I’ve never been more excited in my life. I mean it’s a… I realize that I’m in the thick of a kind of transformational change that American higher education hasn’t seen in at least 130 or 40 years, you know, and those don’t come along very often. I think I have, in the context of my own small institution, some role I hope to play in figuring it out. How do we survive in this world? Cause we’re not all going to survive, that’s the bottom line.

Institutional tensions and change. The interview began with a discussion of the tensions and conflicts at Institution-4, particularly concerning the intersection of academics and finances. CAO4 stated:
I would say that my sense of it is that there is…, that we are in the middle of a perfect storm here. And that there are two dimensions of that storm. One dimension is a national phenomenon that is affecting higher education as a whole. And liberal arts colleges have a particular challenge which is the kind of education that we deliver, which is very high touch, and it’s very, very expensive. And we are all not doing a very good job of explaining why it is that the kind of education we offer or provide has probably never been more urgently needed than it is right now. In a world in which, you know, many graduates will go out and have careers that don't exist today. How do you prepare for a career that doesn't exist? Or change careers multiple times? You know you have to have that kind of versatility and I think that’s the strength of the kind of educations we offer. The irony is that we are now having to live that out ourselves and not as an abstract but as a reality.

The participant continued:

So there’s that level of the perfect storm, and then there’s the level of the perfect storm which is of [Institution-4’s] own making. So bad decisions were made over a period of time. I would add to the picture the economic downturn of 2008-2009. You know, the second worst recession in the history of the country. That all came together in one moment so the global changes in American higher education were happening. [Institution-4] was kind of not aware, and we weren’t alone in that. A lot of people weren’t aware of it either. The economic downturn hit. [Institution-4] made some very bad decisions at that moment.
The participant stated that although their endowment had not changed very much, it should have grown significantly but instead got “swallowed up in debt.” This had resulted in a downturn of credit ratings.

However, CAO4 related that a new president had arrived at the institution several years before, and rather than engaging in belt-tightening or cost-cutting had chosen to “spend money rather than cut programs because it was their analysis that the problem here was a revenue problem, not an expense problem.” Additionally they said, the institution had become gradually less competitive relative to similar institutions because it had not begun to diversify programs and to develop other sources of revenue.

In describing the situation confronting the new president, CAO4 said:

[The new president] inherited a faculty that hadn’t had a pay raise in five years. We have deferred maintenance of over $80M. We had a really catastrophically bad dining service and facility that was probably 40 years without any renovation at all. So [the president] borrowed [funds] essentially, and said basically this is a rainy day fund and we’re in the middle of a big rain storm.

CAO4 described this strategy as “strategic investing to crank the engine of revenue generation by attracting students.” In response to a comment that this sounded like the old axiom that ‘you can’t cut your way to prosperity’ they replied, “That’s it exactly.”

The participant also stated that the press had not been kind to the school. “When you walk into a big deficit, spending isn’t a typical response.”

The participant related that the institution had seen a loss in institutional rankings which had further hurt their efforts. One of the most important steps taken in response to this crisis had been strengthening student recruitment efforts. A new, highly capable
individual had been hired to head that effort, “who really is fantastic and has done a great job, you know again boosting [enrollment]” as well as lowering discount rate, increasing diversity, and increasing student quality.

When asked about adherence to the liberal arts mission of the school and how that factored into decision-making, the CAO provided a very forthcoming answer that reflected both their knowledge and involvement in the challenges surrounding the issue:

First of all there is a decline, demographically the reality is that the number of students who are in the 18 to 22 year old cohort are decreasing. The capacity of people to pay that kind of money is also decreasing. Which will get me to the international angle, cause we are going after that in a very big way. Because while demographically there is a huge downturn in the United States, globally the demand for American higher education has never been stronger. CAO4 continued, “I would say that my fundamental core belief is that the value of what we offer has never been more needed than it is right now, and more perfectly suited to the environment in which we live.” But, they explained:

The problem is that the families buying what we are selling are thinking in very utilitarian terms and want to know, ‘how is this quarter of a million dollars you’re asking me to spend gonna lead to a job?’ And it’s very hard to convey to them, we’re not gonna teach your kid what to think, but how to think. In a way that’s gonna make them more, you know, more nimble on their feet in an ever changing world. That’s gonna provide them with skills of critical thinking, critical writing, how to make a good argument. How to think outside the box. You know, that all sounds vague. They want to know… tell me how your business, you know, how
your business majors do in the job market. They’re thinking in that very utilitarian way.

They concluded this line of thought by stating:

So I think the challenge is, as we know, what a student majors in in a liberal arts college makes absolutely no difference. I don’t care if it’s French literature or physics. It makes no difference, because the skills are what are critical. They’re probably not gonna do anything in French language, and they’re probably not gonna do anything as a physics major. They’re gonna learn skills here that they’re gonna be able to translate into jobs out there.

Asked how this factored into bringing in the freshmen class, they said:

I think I’m pragmatic in the sense that I know the problem is that I can't just…

Expounding on the virtues of liberal arts education is not gonna convince anybody, I don’t think. So I have to think, I have to put myself in the mindset of the consumer, you know what are they looking for, and try to speak a language which they understand. And so I have to be very focused on explaining in very practical terms what… how the education that we’re providing here is gonna lead to jobs in a concrete way.

CAO4 related that, “I just put my kid through college. It was a very good liberal arts college in the Midwest. And I paid a quarter of a million dollars for that education, and I, I don’t regret it for a moment.”

The participant also conveyed that at Institution-4 relations with the faculty were not without problem:
There are a lot of tensions, and I’ve just read a fabulous book on shared governance and it’s the first time that it ever made any sense to me. And all through it he is making the argument, we use this term shared governance and we don’t know what it means. Or we all have very different definitions of what it means.

CAO4 went on to state that the book they had referenced listed three possible concepts of shared governance: totally equality between the faculty and the administration; consultation, “faculty don’t really have a vote in this, but we consult with them;” and, boundary setting, involving establishing respective roles for faculty and for administration. “And he said actually at the end of the day it’s none of those three things. What it really is is a systems approach to aligning ideas about mission and strategy and so forth, and there’s the operational side.” He noted that the greatest challenge is, “But we have to be on the same page about mission.”

In this regard, CAO4 said:

And so the challenge here at [Institution-4] is that we have a very bad history of shared governance. It doesn’t exist. I mean it exists, but in those ways that I’ve described. For faculty it’s like we get 100% of… It’s out of touch with reality, and it’s not a good way to make decisions ultimately at the end of the day. It’s a huge impediment to progress here because we’re not on the same page about even what the term means. And so we certainly don’t have a well-functioning shared governance system we should have, and I’m convinced more and more that for institutions like [us] to succeed in this very, very tough world, that they’re going
to have to know exactly what shared governance means, and they’re gonna all have to be on the same page.

In response to a comment that if not, you simply end up just fighting among yourselves, CAO4 replied, “Exactly. Over an ever smaller pie.”

When asked to summarize their perspective on the state of Institution-4 at this time, the participant said, “There is a turnaround underway here, also we do have a serious financial issue.”

**Academic response.** When asked what decisions were being made to improve the institution and to make it more sustainable, the CAO said:

The president is committed. [They] should be, to preserving the core mission of the institution which is delivering the academic program. So the changes will come in areas like benefits. As I keep pointing out to them, ‘yeah, that’s not the core academic program, but the people who deliver it are going to be affected by that.’ And we have to be sensitive to that fact.

When asked for specific examples regarding their own area of academics, CAO4 described the situation in the following way:

So the challenge now is that we still have to get innovative programs, we still have to make transformations, where do you get the cash? And now the only place to get the cash is from structural reorganization. That is very much on the agenda. Where can we cut and streamline and gain some academic efficiencies. Then added, “Because we can’t borrow any more money.”
The participant said that the institution had begun creating some additional programs including graduate programs. But, they noted, liberal arts “is now by far the biggest part of the institution and is the revenue generator.” They continued:

My mandate is to try to develop what I’ll call ‘plus 1’ programs, to make the graduate program, which is very humanities focused, [more successful]. Not to lose the humanity character totally, but to try to look for graduate programs that grow kind of organically out of the strength we have in the college. Because the graduate school actually has no freestanding faculty of its own.

The CAO added, “I’d like to create a master of finance. One year add on. So that’s the kind of direction that we’re moving in.” However, CAO4 then added, “So to me the answer to our problem is not to become more pre-professional. The answer is to develop and enhance those skills that we have already been developing for [over 100] years.”

The participant was then asked how they believed it would be possible to avoid becoming more pre-professional given the views they had described about what parents and students were looking for in a school. The CAO was asked whether they had to “sell” this to prospective parents and students? To this inquiry, they responded:

Right, right. So part of it is marketing and being able to communicate effectively to the consumer what it is, why they should buy your product. The second part of it is on us more. Which is making damn sure that you are delivering that product. (laughing) So that outcomes are good. And you’ve got to stack the deck. You’ve got to make sure that you’re advising and helping these kids think through what they want to be, and what they want to do, and how to get [there].

CAO4 continued:
You know, cause at the end of the day it’s about outcomes. You want to make sure that the students that graduate here actually achieve the things that you’re promising the parent. Because you can lie, and get away with it for a few years. But at the end of the day if the outcomes are not there, then they’re not gonna buy your product.” They then added, “Cause these kids think in a very utilitarian way. Cause they go at it in this very, very ‘what’s in it for me?’ kind of attitude and you have to look at it in a different way.

**Leadership style / decision-making.** When asked if the participant could speak to their constituents and what role they played in the CAO’s decision-making, they stated:

So my constituencies are my students, my faculty, my administrative colleagues, my board, my parents. You know, parents of my students as well. I would say those are my main constituencies. The faculty is the interesting one because its the one that is constant, relatively. The students come and go every four years, the parents come and go every four years. The administration turns over – I’ve had [several presidents in a relatively short time] here, so you know, they change. But faculty remains relatively constant.

CAO4 continued:

And it’s an odd constituency. They’re not your standard employee. You know, you’ve given them something called tenure. They can tell you to go screw yourself if they don’t like what you’re asking them to do. And so it’s… It requires a lot of… My area is [name of academic area of study] and as they say, we drink a lot of tea, you know, you’ve got to drink a lot of tea. You’ve got to sit down and drink a lot of tea and jawbone people because I can’t threaten people. I
can’t fire people. If they’re untenured faculty I can, but if they’re not I can’t. I have nothing over them. A few things, like I can make it difficult for them to get a grant or something like that. Or faculty travel grant or something, relatively small potatoes. And I wouldn’t use that anyway, even if I could. I wouldn’t use it because it’s not effective.

Based on the information gained through the interview to this point, the observation was made that it sounded like CAO4 relied a lot on personal relationships and sort of convincing people, building a case. In response, the participant said, “Absolutely, absolutely. Absolutely.” CAO4 then added:

And I think transparency is a really big part of it. I need them to understand how severe the crisis is. I need to be able to go to them and you know, buttonhole them and you say, OK here’s what I think, what do you think. And have good, hard conversations with them. At the end of the day I need to be ready, able, to make a decision. You know, this is what I’m going to do and why. But I’ve found that if I had those conversations with them and they know what I’m thinking and why I’m thinking it, they’ll accept my conclusions even if they don’t like them.

This was restated to the participant by saying, “So you build a very convincing case.” CAO4 replied, “So yeah, exactly. That’s the only way that I can see to do it.”

**Relationship with the CFO.** The next questions dealt with the relationship between the participant and the CFO in decision-making that involved academics and financials. The CAO began by saying, “Right, yeah, very good.” But CAO4 quickly added:
And in my mind there’s actually three of us who work, well four of us who work really closely. So it’s not just my CFO but also my [head of enrollment management], [because they’re] the guy who’s out there selling stuff in the marketplace.

When asked whether this ‘selling’ was interactive with the program area involving academics, the participant responded, “Very, very, very, very.” Then added:

So I’ll go to [name] and I’ll say so will this work? So for example, the master of finance, you know. What are your figures showing you, is there any traction there. Cause I don’t want to, as Jim Collins says, shoot bullets not cannon balls. You know, figure out what’s gonna work before you do it cause if you’re gonna invest resources, especially in a very scarce world, you better be damned sure that every bullet you fire is a good one.

CAO4 went on to say that the head of student life was also one of their three key partners in decision-making, “Cause we have to look at the educational process as comprehensive, as whole life here, it’s not just what happens in the classroom, it’s what happens outside the classroom as well.” The participant concluded, “So I would say I work most intensively with all four of [us]. You know, the money people, the admissions people, the student life people, and me.”

When asked if the relationships between senior leaders at Institution-4 had traditionally been positive and collaborative, CAO4 responded that that had not always been the case.

And that was one of my first priorities when I came into this job, because the connections between my office and student life was very weak. I’ve got to say
the first [several] years here I did not get along well with the CFO, and my feeling was that [they were] not up to the job. And I tried to tell the president that and so forth, [and they] finally got it. And [they’re] no longer here.

They then added:

In four years here I never had to put together a budget. We just rolled the budget over. And then the first year I said, OK, that’s OK. I can deal with that. But you know, [several] years. No budget process? You know, that’s crazy. Uh, just rolling over the budgets, you know, it’s a hell of a way to run a ship, I thought.

The CAO provided a few more historical details, but then returned to the present:

Anyway, so the new CFO and I get along with very, very well. We don’t always agree on everything but [they’re] a bottom line kind of [person], you know. But [they] work with me and, and we work collectively with the [head of] enrollment management. So I feel like we’re in this together. I think we respect each other. We don’t always agree, but we respect each other.

The participant went on to relate that the current CFO had recently said to them,

“[CAO4], you know, I don’t know if I’m funding a turnaround plan or a closing out plan. I don’t know that yet.” Then quickly added, “I can’t tell you what a relief it is to have some sense of confidence that the people on the finance side know what the hell they’re doing.”

CAO4 also spoke to the way they had people who reported to them with whom they had worked intensively. During this part of the discussion it became evident that the participant had put substantial effort into forming a good team of direct reports, and that they viewed the members of that team as a significant asset in decision-making:
I work very hard to pick great people. You know, my president says my single
greatest skill is the ability to find the right people and to lead them. And I mostly
lead them by getting out of their way because they’re very good at what they do.
When asked if they brought faculty into these discussions as well they replied, “Two of
them are faculty. I have [several academic administrators] who sit under me. So I think
we complement each other. A nice, balanced team. We all know each other’s strengths
and weaknesses.”

**Use of information in decision-making.** The next portion of the interview
included questions concerning CAO4’s decision-making including tools and resources
they used to support the process. As they described this:

Data. Data. Lots of data. When I came into this job we literally had no IR office.
Uh, so… (laughing) So it’s hard to make decisions when you have no data. And
[name], my president, is a real data hound. So [they] want really high quality
data. And [they are] all about, [they’ll] say to you, ‘that’s a nice opinion you’ve
got there, but you’ve got not a shred of evidence to back it up.’ ‘What’s the
benchmarking on this? Show me what other institutions are doing. When you’re
complaining to me about the size of this or that, give me our peer institutions,
give me what their sizes are so I can see a number.’

After a brief note describing the difference between structured and unstructured
information, CAO4 was asked to describe how both factored into their decision-making.
Through the following discussion, it became apparent that the participant clearly
understood the distinction and had internalized the value of both. In their words:
I try to use everything I can. And try to triangulate, basically. Because at the end of the day, there is an art and a science to it. Right? So I try to get as much of the science as I can possibly can, but at the end of the day I also think it’s a judgment call. And I think that with good leaders the data will take you so far, and then the rest you have to do on your own. And there the qualitative stuff becomes really, really important.

The participant also related this to practical experience in their role as a senior leader at Institution-4:

And you know, the number of times I think intuitively what the answer is, and then I look at the data, and it’s like ‘holy crap, if I had gone down that road it would have been a disaster.’ There are other times where the intuitive sense is absolutely right. It’s backed up by the data. But to make sure that wherever you can get good data, you use it.

In following up, CAO4 was asked what other tools or resources they used to support their decision-making. The answer they provided involved a holistic view:

You know, experience becomes really important. So I try to triangulate as best I can and I don’t, what I call the paralysis of analysis. You can kind of look at the data forever and ever, and you know, it’s not gonna tell you an answer.

When asked if they weighted structured and unstructured information differently, CAO4 replied that they did not weight them differently with consistency. As the participant described this:

I would say that I have seen enough data to know that you can’t always count on it. Like the other day, [DIR] was getting me some data, and I said ‘[DIR] this is
crap, I can tell it’s crap. Cause it’s not true.’ And [they] went back and [they] said ‘you know, you’re right.’ It wasn’t right. So, sometimes I have almost a third sense, like this data is bullshit. You know, and we’re all looking at data and it’s telling me two totally opposite stories. So what was it, ‘damned lies and statistics [referencing a quote]?’

They added:

If I’ve got somebody who I know always give me good data, I tend to rely on it heavily. If it’s somebody I don’t know that well, or, I’ve got kind of mixed results from in the past, I’ll be a little more skeptical. I think I always value the qualitative data as well, and try to balance in my mind what makes sense. But without denying sometimes the hard data, the number data, can tell you a story that you were surprised at. Sometimes common sense actually isn’t common sense. It’s wrong. So being aware of, being sensitive to [that].

CAO4 described other forms of information they actively sought to aid them in their role as well. The words used in providing this information displayed reflection by the participant:

You know, it’s that last thing in the world I would have read, but I read a lot of business books now. Things like Jim Collins on Good to Great, and Great by Choice, and the Blue Ocean Strategy books. I consume them and I find them hugely helpful, you know, in how to think. Cause we’re in an industry and we have to think about that. Again, my training is in [name of area of academic study], so this is something that is very, very alien. But you know, I’m having to live like my colleagues, I’m having to live out what I preach. The importance of
the liberal arts. And it’s sort of like, you know, if the education I got is really what I think it is, which is that it makes me versatile, then I should be able to tackle this stuff. I should be able to face any problem, and go out and figure it out. I’m relying on the education that I’m selling to try to make this place survive in a world that’s very frightening. And not just my institution, but… as I look in this field, 25 years from now, personally I won’t be in it anymore. But it’s gonna look radically different.

The questions then returned to the topic of Institutional Research at Institution-4. When asked how the participant would characterize the job that the IR office is doing now, they replied: “Now? Good. Very good. I would say very good. The president’s not satisfied with it, but compared with what I had before it’s great.” When asked about the concerns of the president, CAO4 replied that it was primarily a matter of thinking outside the box and being more proactive. Anticipating what was needed. As they described this: “I shouldn’t have to be telling you, you should know what I need.’ And so that’s the complaint.” They went on to describe how the DIR was relatively new to the position, and that much had changed in that area over the past few years in a positive way.

When the participant was asked whether Institutional Research produced both unstructured and structured information, they replied that it was mostly structured. Then added:

We created a set of dashboards, let me show you that they look like… uh… (looking through materials). Here it is, right here. So these are the kinds of dashboards that we are working with now, that I think are really helpful. And
[they’ve] got a series of different things, metrics we’re looking at, but this gives us a kind of green light, red light. So we do different ones, for each committee on the board.

When asked how they go about gathering unstructured information that was useful to them CAO4 replied:

A variety of ways, I mean I talk to a lot of people. I talk to my colleagues here, I talk to my colleagues outside the institution. I read a lot. Anything I can get my hands on that will inform me. I’ll ask colleagues ‘what do you think about this and where can I get the data?’ I think I just cast the net as broadly as I can.

At the close of the interview, the participant was asked if there was anything they would like to add to what had already been discussed. They replied:

Wow, that’s a good question. You know, part of it’s historical knowledge. I guess there’s what we call knowledge, and there’s something called wisdom, right? I understand what wisdom is, now. I didn’t understand it when I was 20. But I understand it now, you know.

CAO4 went on to offer an example of this that was directly relevant to their experience with decision-making at Institution-4 that illustrated the value of both experience and judgment:

And there are a number of times where [the president] has not listened to me and has reaped the benefits, or the punishment for it. It’s usually punishment. So I would guess that quality of experience, you know, living long enough in a place. The problem is, they’re relatively new to [Institution-4]. [They’ve] been here [several] years, I’ve been here [number] years. So I know where all the bodies
are buried, I know the personalities of the individuals. I bring that depth of knowledge about individuals, about history.

In closing, CAO4 said:

And I really do worry about the period to come, cause I know the period to come is the belt-tightening part. The strategic spending was a lot of fun, you know.

The belt-tightening is not going to be a lot of fun.

**Institution-4: Chief Financial Officer (designated CFO4).** The interview with CFO4 was insightful for a number of reasons. Much was learned about Institution-4 and the challenges facing it from the responses provided by this participant. Much was similarly learned about the efforts of an experienced CFO in helping turn around a struggling institution. Among the many impressive things gained from this interview was the story of the participant, who had served educational and non-profit organizations and who welcomed the challenge of coming to an institution that was living a threatened existence.

CFO4 had been at the institution in the category of 0-2 years and had worked with another institution in similar circumstances previously in their career, they said. “I really do like working with people which is what a lot of higher ed is, and I just love seeing the kids come here as freshmen and grow up and go out as seniors. It’s really nice.” They added:

One of the reasons I feel so good about being here is that my style fits in with the culture. I mean everybody’s got to adapt. And I’ve got to adapt to the culture as opposed to the opposite. But, it’s a very open culture. The school’s been through some tough times. I don’t want to give you the impression that it’s nirvana. You
know, it’s been a tough road here for the school over the past 10 years. But it's repositioning itself which is great.

**Institutional tensions and change.** In beginning the questions, the CFO was asked to provide some sense of where Institution-4 currently stood with regard to financial health. They replied, “[This] is a school that’s struggling.” Then referencing a similar experience at another institution, continued:

So in the sense you might change ships but you’re not out of the storm. But what I liked about [Institution-4] is that its board and its president had made a decision that the board and staff and president were still grappling with at [the previous institution] but were getting close to making. That was going into a deficit financed turnaround plan where really your net operation was living off the balance sheet. Living off [debt]. And we are doing that now.

In their responses during the interview, the participant gave the impression of being both forthright as well as having a considered understanding and philosophy concerning the liberal arts. When asked what role adherence to a liberal arts mission played in their own decisions, the response reflected this:

I would say, in my role as the [CFO], we’re constantly thinking about supporting that culture and that mission of the liberal arts education. Particularly when it comes to things like class-size, when it comes to things like academic quality, when it comes to the breadth and depth of the academic offerings that are really consistent with a traditional liberal arts institution. So there are often times when decisions that we make here… you know we have two bottom lines. We have the
bottom line at the end of the statement of activities. And then we have the bottom line that’s our mission. That bottom line is first. That’s our first bottom line.

The participant continued in saying, “Financial performance is our second bottom line. Now, we’d like the two to be in sync as often as possible. (laughter) But sometimes they’re not.”

CFO4 went on to describe a situation in which the financial side would be balanced against what was seen to be a mission-related decision:

So when there’s a particular course that might hypothetically have eight students. And it’s with a senior faculty member whose been here for 35 or 40 years who’s phenomenal. The students love him or her, their parents and their grandparents probably taught by him or her. We’re not going to cancel that class for lots of reasons. You know, part of it is just, just that fact that it’s a legacy class, but it’s also a legacy class that’s intrinsic to the role of a good liberal arts education in which these kids are graduating. So eight or ten students a semester, it may not be financially viable but it's mission viable.

The participant discussed a number of tensions and conflicts at Institution-4. Not surprisingly these dealt largely with the intersection of programs and revenue, and particularly enrollment. As they described this:

I think one of those is that perpetual tension between mission and finance, where profitability can oftentimes get in the way of, or thinking about profitability can get in the way of the, the decision-making that's got to be made to support the quality education and the academic enterprise. I think it is a perpetual struggle.
And it never goes away. I don’t think it ever will. Especially as schools, small institutions like [Institution-4] are under, constant pressure to make the class. The participant went on to explain that making the class can sometimes have a quantitative impact and qualitative impact that are not always the same. “In fact, they’re often diametrically opposed. Cause then all of a sudden you’ve got serious retention problems because the kids you’re letting in can’t make it.”

In the area of key outcomes or changes that Institution-4 had sought during recent years, they replied that “one was to significantly raise retention.” The participant went on to note the relationship between retention and quality admissions because high quality students can “pass muster and graduate.” CFO4 stated that raising retention was easier than growing enrollment. “Growing enrollment is taking a little longer. And it’s a slow but steady progress. It’s a slog.” As the participant related, increasing enrollment by 500 students would likely result in a financially viable model at Institution-4.

Surprisingly, when asked to describe their constituencies CFO4 stated that the faculty was one of, if not their primary constituency. The reason, they noted, was that faculty need to be “enfranchised” in the outcomes. They described meeting with academic administrators and having “a very frank conversation with them about the financial health of the institution, what we’re doing with the turnaround plan.” They continued:

I get their feedback. No so much feedback from a financial perspective, but feedback from an interpretive perspective because as faculty they hear me say things, or they look at certain numbers and they start to process it, and so if the
message isn’t clear and well managed, they process it in the wrong direction. So what we try and do is just a good conversation.

They noted that there is a more formal process in place, “But the conversational interaction with the faculty is pretty valuable.”

CFO4 was asked if they considered these interactions as information gathering. They replied:

It is very valuable for me. You know, it’s not my phrase, I didn’t coin it, but it’s management by wandering around and having conversations. Particularly with faculty, I find that very, very helpful. The feedback I get is that they appreciate it and they find it equally helpful. There’s so much nuance to running a small university like this. So you pick up on the nuance. And I get to share some of the nuance from my perspective. So it helps.

CFO4 described their role in the budgeting process as being “the interpreter.” They noted that they had a great finance staff who served as “the accounting technicians of the family.” They added, “That’s not my role. I walk around. I’m the interpreter.”

The participant went on to say that with regard to financial decisions, they were involved in the process every step of the way. Institution-4 has an advisory committee for resource allocation decisions that includes faculty, staff, and student representation. The participant said that it was this group that developed resource allocation recommendations that are then sent to the cabinet. As they noted, many people who contributed information necessary for the budget decisions were on this advisory committee.
With regard to their role regarding the budget development process, CFO4 related that they attended all of the meetings of the budget advisory group and participated in the discussions, principally in an advisory role. As they described it:

I always find that advice is on a spectrum where advice, when well-considered and defensibly offered, is deliberative more than it is advisory by virtue of the fact that more people count on advice. That doesn't mean that they’re lemmings and just sit back and accept everything. But if people believe that the advice is coming from a source of competency, and coming from someone who believes in the mission, they tend to take the advice more often than not. So it’s advisory. I don't have the unilateral right to say ‘here's the budget’ but that's not my style either.

The participant said that they really liked to build consensus and added, “I think it’s a very time-consuming process and can sometimes be maddening. But I think at the end of it all you’ll end up getting a better resource allocation model.”

The CFO was asked how they navigated tensions and conflicts at the institution in their position. They replied by saying:

I think one of the best ways to navigate conflicts and tension is to identify them as early as possible, and that's where that constant conversation, constant staying in touch, having a great staff… You don’t catch everything. But I think from my perspective the best way to deal with it is head-on. I think the best way to deal with it is to, whether singularly or in a small group of people who feel the same, is to sit down with the source of the tension and just try to talk it through. It can be difficult only because it can be awkward and unpleasant. But at the same time,
more often than not I find the conflicts are the result of bad information. So if you clarify the information and try and figure out what the source of the information was so you can fix that, it tends to go away. But I call it bad information and people call it gossip.

Financial response. In the area of financial responses developed by Institution-4, CFO4 stated that, “Our president and board decided [several] years ago that we were not gonna turn the ship around by Draconian cuts. Uh, massive layoffs.” They added:

So it’s going to be a bit of a challenge for a few more years, but it a good board, a strong president, and we’re doing some strategic expense reductions but nothing Draconian, no layoffs, nothing like that. We don't wanna impact either the morale or the DNA of the place’s ability to move forward. So, slow but steady.

The participant then said, “And actually things have started to look up finally. This year we’re really starting to see some nice enrollment numbers on the graduate and undergraduate sides.”

CFO4 stated that going forward, looking for ways to gain efficiency and to optimize the institution’s operations including academic programs was an important effort:

And we’re looking at those programs and we’re trying to get a sense of what the expense burden is. Not to eliminate the burden but to reduce it, or to look at that expense burden and to say, is that really still mission-critical? It might have been 15 years ago, but is it now? And that helps us identify whether or not, maybe that expense needs to go away and we have to manage that expense out over time. So
it's all that kind of information. Some of it’s consistent with the [institution’s] history, some of it’s new.

The participant went on to say that information had been developed to help in this assessment process. “We’ve got P&Ls by college, we’ve got P&Ls by program that we’re putting together [that] we’re spending a lot of time looking at.” Then added:

I’m trying to understand sort of the… the expense burdens of the institution, are never just one big… I mean it’s dozens and dozens and dozens of programs, some of which have been running for decades and nobody’s ever looked at them. So it’s not like we’re on a witch hunt. We’re trying to be very rational.

When asked, the CFO confirmed that this process included looking at both instructional and non-instructional programs.

Leadership style / decision-making. In discussing the school’s willingness to make the changes seen as necessary, and particularly regarding faculty, CFO4 was asked whether the very difficult times the institution was experiencing had made their constituents more willing to make hard decisions. To this, they responded:

I think that’s a mixed answer. I think that on the one hand because the school has taken a couple of shots over the decade, people are a bit gun shy. On the other hand, I think people are more realistic and receptive to rational and defensible change. I don't think they respond well, and I don’t think most institutions do, to, sort of the fiscal exigency. ‘We’ve gotta cut everybody’s legs out from under them’ kind of change. That’s never been proposed here. I hope it never is.
The CFO continued, “I’m finding people very receptive to good information that’s shared with them genuinely. Right, and that it’s backed up and you don’t walk in and say ‘trust me.’ They are entitled to more than that.”

**Relationship with the CAO.** It seemed evident throughout the interview that CFO4 was very well aware of their pivotal role not only in ensuring the financial health of the institution, but doing so in the context of the mission of the institution. When asked about their relationship with the CAO as their counterpart in this regard, the participant began by noting, “It’s not like we have lunch every day.” However, the CFO did describe the level of collaboration and coordination that emphasized its importance. Regarding their communication, the participant stated:

> It’s not always budget. You know, where I’ll pick up the phone and I’ll say to [them], ‘this is what I’m thinking, what are you thinking?’ You know, sometimes [they’ll] say it makes a lot of sense, or they’ll say, you know, I suggest you, maybe fine tune a little bit. Or, they might say, I think you should back off cause this is not a good time. So I appreciate that and it’s good information.

Then added, “you start to pick up the vibes as to when you need to pick up the phone and talk.”

CFO4 did confirm their understanding of the importance of the relationship between the CFO and the CAO of a higher education institution:

> And, it’s all over the literature but there really are three very prominent people who help move an institution forward hopefully. And that’s the president, the provost, and the CFO. It’s the three legs of the stool. And, there may be stools with other types of legs, but I think those are the three primary ones. And so they
really have to be in sync. We’re in touch fairly regularly, I mean we meet regularly through cabinet.

The participant went on to say that the conversations were equally helpful when the cabinet members were working among themselves when the president was not present. “There’s a lot of really healthy conversation when the boss isn’t in the room, you know.”

In conclusion, CFO4 said:

But in my prior experience I've always felt that on behalf of the president, the provost is the keeper of the mission and likewise I’m the keeper of resources. And so like I said earlier where the mission and the resource allocation have to be in sync conceptually, I think on a practical day-to-day basis through the provost and the CFO, that's how you make it work.

*Use of information in decision-making.* It had become evident throughout the interview that CFO4 factored information into their thinking and decision-making in a significant way. In the final portion of the interview we explored this area in more detail. The CFO described their view that information was indeed important, and that there was power in information. Yet they fully realized that neither their own command of the information nor the power of their position was effective in bringing about change at the school. As they described this:

Well, I mean I’m a numbers person. So, so I look at the numbers and I have to… personally speaking, I have to discipline myself. I have to work hard at adding that contextual overlay. And so it’s a struggle for me to do that.

CFO4 added, “I don’t like to walk into a room and pull rank by saying ‘I’ve got the numbers and you don't, so I know more than you.’” They continued by saying:
I find that at the end of all of it…. You know, so there’s trust and integrity very much involved in it. But the trust can’t be a power play. You know, you can’t use the word trust or the notion of trust and leverage it to get what you want, even though I think human nature probably prompts you to want to do that because it's fast, it’s efficient, and you can walk out of a room having said, well I got that one. But it doesn’t work that way.

The participant related that significant effort was being made to gather reliable information to support financial analyses and decision-making, but that they were still not entirely comfortable in the accuracy of the numbers. The institution had an older ERP system they described as not being at the level needed. “We have a lousy one. It’s [name]. So I find it really clunky. It’s a terrible reporter.” This problem was said to be worsened because it was combined with the need to ensure the data was correct. “We’ve got some serious cleanup to do. We had some serious database integrity issues that we’re working on.”

When asked about information that played into their decision-making, the CFO described a combination of quantitative and qualitative sources.

Well we’ve got enrollment reports, we've got student satisfaction surveys, we’ve got student outcomes surveys. Certainly we’ve got our financial reports, our variance reports, we’ve got P&Ls by college, we’ve got P&Ls by program that we’re putting together.

This led to question of the way in which CFO4 viewed and used both structured and unstructured information. While previously stating that they are a “numbers person,”
the participant now said, “the point is, that the numbers are only part of the story.” They added:

   At the end of the day, I think the quantitative data have got to rule the day because that's what they are. OK. As the saying goes, the numbers don’t lie. So you’ve got to use that as the basis. I think, though, there has to be a qualitative overlay that helps you put the numbers in context so that the…. Because otherwise I think the numbers are just raw data, and they don't really tell the whole story.

While CFO4 was an experienced financial professional, they simultaneously made it clear that numbers did not automatically translate to effective institutional decisions. In their words:

   I don’t want to get melodramatic, but why have people in charge of things? I mean you could have a computer spit out the numbers, and you could have another computer read the numbers and say, well, you’ve got to make this decision. But if you don’t have somebody with a heart and a mind…. Then added, “And it sounds corny. You know, some might even say it’s cliché. But really, that’s why people drive organizations. Because they take the information and… I’ve been in situations where I have seen people take the numbers and said, ‘Well, the numbers are what they are. See ya.’ Or, the numbers are what they are there but there are mitigating or extenuating circumstances, so let's try it a different way before we say, ‘see ya.’

The interview also revealed that Institutional Research at the school had changed significantly over recent years. The head of the unit was relatively new, and the CFO described them as, “Bright, very bright. Very bright, very articulate. [They’re] not a,
wonky [person], yet [they are].” CFO4 went on to describe the fact that the data produced by Institutional Research played an important role in decision-making in all areas of the institution. “The data that they crank out certainly does.” The participant reported that the IR office had helped provide important information to aid student affairs, enrollment, and academics. Among other contributions, “They produce wonderful scorecards.” The participant described how the scorecards had been shared regularly with the board of trustees. As they described this:

It’s a consistent look and feel of metrics, which I think does a couple of things. It gives people the comfort that they are seeing the same thing across the institution regardless of the division. And then secondly, they’re seeing information that is defensible. And so that makes people not only feel good about the look, but feel good about the data. So, very professional shop. They do a really nice job.

When asked whether Institution-4 gathered and used information on the school’s external environment, CFO4 replied that this was done but primarily using external consultants. “We do a lot of peer analysis. We’re undergoing a pretty sizable peer analysis now with our benefits program. We’ve had a couple of salary surveys done. One for faculty one for staff.”

In closing, CFO4 was asked whether they had anything they would like to add that had not already discussed. The reply spoke to their leadership style and particularly to the value they placed on relationships and collaboration:

I think that while it’s certainly not perfect and I think that some of my colleagues might disagree with me, I think it’s on its way to being a pretty consensual
process here. Which I think is good. It’s the process I like, although I think it's a process that drives me the craziest.

**Institution-4: Director of Institutional Research (designated DIR4).** DIR4 was relatively new to their position at Institution-4, in the range of 0-2 years. The information gathered through this interview largely reflected that already obtained from CAO4 and CFO4, and it was convergent with the accounts of both senior leaders.

In terms of professional background, DIR4 related their previous institutional research experience which was significant. They confirmed that Institution-4 had sought to strengthen the IR function at the school in recent years. Among the changes employed by the institution had been the creation of a dedicated office for institutional research and appointing a full-time director for the function. The participant also noted that assessment at the institution was changing as well, and that another office was now assuming much of the work concerning student learning outcomes.

The DIR stated that regarding their constituencies, among the highest priorities were student enrollment and the president. They also listed the board as a significant constituent to whom they provided information indirectly. With regard to academics, DIR4 stated that while they interacted with them less directly, “they consume information.”

The DIR reported that there were “three drop everything” issues for their office: enrollment, retention, and benchmarking. When work was requested in one of these areas, it became a high priority to develop the required information. DIR4 explained that these were very important areas of decision-making at the institution, and ones in which information played a key role in helping make the ultimate decisions. A specific area
where DIR4 stated they were dedicating significant time and effort was in supporting student recruitment, and noted that this included work in financial aid analysis including yield optimization modeling.

DIR4 expressed their satisfaction with the role they were playing at Institution-4, but simultaneously expressed their desire to play a larger strategic role in the direction of the school. They noted that they believed things were evolving in this direction. When asked about more strategic work they were now involved in, the participant described the work they were performing related to competitor institutions, including both peers and aspirant schools. DIR4 said that much of this was in the areas of strengthening both student recruitment and student retention. They went on to discuss what had already been learned concerning the specific schools Institution-4 was competing with in both categories. The DIR also described the work they had done to proactively put information in the hands of decision-makers at the institution. This involved developing key metrics that were published for each of the divisions at the institution in the form of dashboards. The participant went on to say that the board had come to rely on these dashboard for information as well.

With regard to challenges in their work, DIR4 listed several issues. Among these were the challenges with the school’s current ERP system. Another issue the participant discussed was the significant employee turnover the school had experienced. They noted this had been very problematic in several key areas. In their words, “Tons of people have left.” The specifically observed that “IT has been decimated.” Another issue mentioned was that the IR office was “extremely busy with processing, reports, requests.” A significant part of this, they noted, was compliance and not considered strategic in nature.
The heavy utilization of the limited resources of their office was noted by the participant. As DIR4 commented, “I don’t get out often” around the campus.

Among the information gained from DIR4 was the way in which they viewed the institution in what could be described as a holistic manner. Their responses indicated this in several ways. While the participant confirmed that the institution was “very focused on financial challenges,” they simultaneously mentioned the important work they were doing across several key areas of the institution and how this could benefit the school. As DIR4 phrased this, “It’s all tied together.”
Chapter 5: Discussion and Conclusions

This study sought to investigate and answer five research questions:

1. How do participants express tensions between the liberal arts mission and financial challenges these institutions face?

2. How do participants negotiate the tensions (as expressed by the participants) between the liberal arts mission and financial challenges?

3. How do participants define their constituencies and what role do they play in participants’ decision making, particularly in the context of shared governance?

4. How does a participant's identification as CFO vs. CAO inform their decision making?

5. What types of data and/or information are available to these decision-makers in the areas being investigated, and what bearing does it have on their decisions?

The interviews with participants, combined with the substantial information asset gathering conducted concerning each of the four institutions, combined to produce substantive information that enabled each of the five research questions to be addressed. The results were provided in Chapter 4, including summaries of the 12 CAO, CFO, and DIR participant interviews. These summaries included results of the thematic analysis, and convergence / divergence assessments using intra-method triangulation described in Chapter 3. Summaries of the results by research question, as well as interpretation and discussion of the results, are provided below.

Answers to the Research Questions

Research question 1. How do participants express tensions between the liberal arts mission and financial challenges these institutions face?
**The tensions and conflicts are real.** The participants reported significant, fundamental, inherent tension between the liberal arts mission of the institutions and the financial challenges they were trying to confront. These tensions were being experienced by the CAOs and CFOs in the study, as they described in clear terms during the interviews. However, even though the tensions were substantial with regard to the impact of declining finances on campus operations as well as the outlook for the institutions, the situation did not translate to less commitment for the liberal arts mission at the schools.

It was also evident that both CAOs and CFOs were dealing with these tensions and challenges, sometimes effectively as collaborative colleagues, and sometimes in less collaborative, more transactional manner. At two of the institutions, the relationship between the CAO and CFO was reported by both leaders to be collegial, collaborative, and effective in dealing with the challenges the institution was facing. However, at a third institution the relationship was more transactional and essentially involved working together only when the circumstances required. Both of these senior leaders expressed a level of frustration with the other, the CFO displaying the most frustration by not being able to move forward with key initiatives to strengthen the institution. It should be noted that the CAO at this institution was the individual in whom was detected a degree of conflict between the institution’s survival and their own professional survival. At the fourth institution, the relationship between the CAO and the CFO was essentially adversarial as demonstrated by the interviews with the participants. However, in this case the CAO was quite forthcoming in describing the relationship in that manner while the CFO dismissively described the relationship as, “Oh, pretty good.” However, it
became clear through more focused questions that the relationship between this CAO and CFO was superficial and difficult at best.

These observations are important, because the working relationship between the CAO and CFO was an important factor in how well the institution was responding to the tension between liberal arts mission and financial health, as discussed below.

In the category of Institutional Tensions and Change as developed during the data analysis, the following themes were identified: Declining Net Tuition Revenue, Student Recruitment and Affordability, Consumerism and Return on Investment, Student Retention, Changing Student Demographics, Resistance to Change, Institutional Unpreparedness, and Other Tensions. These themes are the way they played out within and across the institutions in the study are discussed in the following sections.

**At the center: declining net tuition revenue.** One of the areas of this study with the greatest degree of convergence among both the participants as well as the institutions represented, involved the tensions involving liberal arts mission and the finances of the institutions. At an overarching level, all four institutions were found to be struggling to survive financially according to the participants. Three of the CAOs and all four of the CFOs spoke to this reality. While not all participants described this in what could be called a crisis mode currently, three institutions did describe it in these terms. And, all institutions were quite aware of the challenges in the years ahead if current trends continued.

Because all of the participating institutions were ultimately highly tuition-dependent, declining net tuition revenue to support the operations of the schools was a chief concern at a fundamental level. The level of this concern expressed by participants
was made obvious in their comments, with most openly noting that even with best efforts it was still possible the institutions might ultimately not survive. In fact, several of the participants noted in specific terms that the business models of their respective institutions were “unsustainable.” Among the statements in this regard was CFO3: “So I think we’re certainly holding our own, but it’s gonna become increasingly difficult. We’re not sustainable at this point. We’re definitely not sustainable.” CAO4 phrased it this way: “How do we survive in this world? Cause we’re not all going to survive, that’s the bottom line.”

The overarching concern involved financial survival of the institutions due to challenges over net tuition revenue required to support operations and mission in the short and longer term. Simultaneously, participants spoke in detail about significant specific tensions and challenges confronting their institutions today. These more specific challenges are discussed below.

**Student recruitment and affordability.** Enrollment issues constituted significant challenges for the institutions. All of the CAOs noted their substantive involvement in enrollment management issues, even though they were not in charge of student recruitment directly. The corresponding challenges included a consumer-driven focus of parents and students who were concerned over the return on investment (ROI) of a college education. They also noted the relatively high net cost of attendance at their institutions relative to other options including public institutions. As CAO4 noted, “And liberal arts colleges have a particular challenge which is the kind of education that we deliver, which is very high touch, and it’s very, very expensive.”
CAO2 expressed the sentiments of most schools in also noting the challenges of many students from middle-income families to find sufficient financial resource to make attendance possible: “But the middleclass student… They don’t get enough aid and their families don’t make enough money. And you know, that’s a really hard thing to come to terms with.” CFO2 described the situation by stating:

So, you know it’s a challenge. Get everybody in because we need the headcount, but at the same time you want people who are gonna succeed here. You know, we’re all involved in enrollment management and bringing students and keeping students here at one level or another. The pressure is clearly on the [head of enrollment], but we have to work with them.

**Consumerism and return on investment.** All CAOs reported an atmosphere over recent years in which prospective parents and students increasingly questioned the value of a liberal arts education. The CAOs all spoke of the need to “sell” the value of a liberal arts education to prospective parents and students, and to do that by bringing in all possible arguments to buttress their cases. CAO4 described the situation this way: “The problem is that the families buying what we are selling are thinking in very utilitarian terms and want to know, ‘how is this quarter of a million dollars you’re asking me to spend gonna lead to a job?’” They continued:

Expounding on the virtues of liberal arts education is not gonna convince anybody, I don’t think. So I have to put myself in the mindset of the consumer, what are they looking for, and try to speak a language which they understand. And so I have to be very focused on explaining in very practical terms how the education that we’re providing here is gonna lead to jobs in a concrete way.
CAO1 spoke of “trying to provide some kind of data or statistics that show the value of that liberal arts education.”

**Student retention.** Retention issues were a challenge at all four schools and had become a high priority for the institutions, though at least one of the institutions, Instituton-1, had made significant progress in improving retention. The reality that it was easier and less costly to retain current students than to recruit new ones was noted by several participants. Two of the CAOs in the study connected retention to fulfilling a responsibility to students. CAO4 used the expression “making damn sure that you are delivering that product.” But all participants connected student retention directly to the finances of the institution. As CAO2 stated, retention was being looked upon very differently today than had been the case at many institutions in the past:

> And the reality is the challenge is the freshman. You know, we gotta keep them to start off with, and we can’t have this mentality of well, the weakest ones we weed out. We can’t afford to weed out anybody. We gotta save them all.

CAO3 described the retention problems at their schools as “a matter of public record.” CFO3 put a more positive spin on the situation by describing research that showed a significant number of students who left the school eventually graduated from another school.

Retention problems and the efforts to support students were also reported to be sources of tension with faculty. Several CAOs and CFOs spoke of the sense among faculty that the quality of students was declining, and blame for this was often assigned to poor recruiting efforts by the administrators responsible for student recruitment. Three CAOs spoke directly of trying to work with faculty to confront that perception.
CAO2 spoke of this situation in a very compelling way:

I mean, we’re working with the faculty that pens the quality of the students we have been admitting on the [admissions office]. And the [admissions office] isn’t admitting better students. And they don’t understand that this is the reality across the board, that you know, the little blonde, blue-eyed Irish girl in the panel-sided station wagon isn’t pulling up anytime soon. She’s never coming back and this is who you have to teach, so what can we do to help you understand and be prepared to teach this student? And realistically, a student who you never thought you would have to teach. A student whom you never thought you would actually have to encounter at a school like [Institution-2].

CFO3 related that their institution had substantially increased student support services in order to improve student success and retention. “We spend like a million dollars a year, which is a huge amount of money for us.”

**Changing student demographics.** Participants from three of the institutions, including three respective CAOs and two respective CFOs, also noted the tensions that existed because of changing student demographics. Among the specific aspects of this mentioned by the participants were fewer students available to attend the institutions generally, poor preparation of college-age students by public K-12 education, growing inability to pay due to increased numbers of disadvantaged students, growing numbers of minority students, and higher competition for available students. Although the schools competed somewhat with one another, the message was clear in that county colleges with low cost of attendance were significant competitors for students, as well as regional public institutions. Two of the institutions specifically mentioned a growing number of
racially diverse students among those attending their institutions along with the sociocultural challenges of this, and a turn toward poorer and more disadvantaged students to ‘make the class.’ One of the institutions, including both CAO and CFO, related that there were approximately 30 students in attendance who had been homeless.

**Resistance to change.** A category noted at all four institutions, including all CAOs and all but one CFO, was resistance to change. In every case, faculty were mentioned concerning resistance to change. Some of the reasons listed by the participants for this perceived resistance to change included a perceived short-term orientation, being dismissive of the reality of the fiscal challenges, distrust of the administration, lack of a sense of urgency, and unwillingness to create new programs or do away with old ones, among the most often mentioned. CAO2 spoke openly about the longstanding lack of urgency among the members of their institution: “I mean we really have to change things internally to be more competitive, to get more revenue, to have better retention. So no, there was never that urgency and people didn't really see it as their problem to solve.”

CFO1 talked in frustration of taking a number of steps to address declining finances, including selling off assets, reducing staff, and reallocating resources between programs and units. However, this had not resulted in what the participant believed to be a willingness to make needed structural adjustments: “It's not an easy process. It's not a quick process. You have to drag the rest of the community along.” CAO4 described the relationship with faculty at their institution as difficult, and stated “it’s out of touch with reality.”
CAO2 spoke of the sadness on the part of some alumni concerning changes in the school. “You know, they see it more of a loss. They have a difficult time identifying with the students who are being served at the college now, and again, they don't know the realities in higher education.”

I would hasten to note that even while the participants spoke of the resistance to change on the part of faculty, as well as other constituents including alumni, this did not seem to translate in most cases to feelings of animosity. Two of the CFOs seemed to show considerable frustration with faculty. However two of the CFOs and all of the CAOs seemed to separate their personal feelings about faculty members from the fact that faculty were resistant to change. Apparently, resistance to change was essentially a clinical fact to these participants, an objective reality to be dealt with. While they were passionate about moving their institutions forward to address serious financial challenges, they also displayed an appreciation and compassion about their faculty members. Faculty were often referenced as colleagues, and with positive comments about their dedication and value.

**Institutional unpreparedness.** Another area of strong convergence among the participants was the view that the institutions had been ill-prepared for the current challenges with which they had fairly recently been confronted. All four CAOs and three of the CFOs discussed the ways in which they perceived this, including traditionally weak governance structures, lack of mature decision-making processes, and the dearth of data for decision-making in nearly all areas of the institution. Two of the participants discussed their perceptions that the board of trustees of their institutions had not been strong and had not been effective in helping the institutions respond to the challenges.
The interview with CAO1 revealed a pattern that was fairly consistent across the other three institutions as well. CAO1 noted that the ways that things were previously done at their institution were “historically, in many areas much less formal than they may have been done at other institutions.” They noted that in the past the culture at the institution by which decisions had been made involved “a lot of trust and faith put in relationships” as well as “a lot of trust and faith put in the history and tradition and the way things have always been done.” The participant stated that, “we have some work to do in formalizing how decisions are made” and that the institution was “kind of grappling with striking that right balance between not becoming such a bureaucracy for such a small institution, allowing ourselves to keep making decisions, and keep the person kind of in mind when we’re making those decisions.” However, later in the interview the participant raised one of the conflicts facing many schools in similar situations: “we’re loyal to our people to our own detriment at times.”

Other tensions. Several other tensions and conflicts were mentioned by individual participants, but did not constitute converging themes across the participating institutions. One of the CAOs stated that faculty at their institution were concerned and frustrated about what they saw as the “diminished rigor” of academics with the change in student demographics. Several institutions reported that faculty had taken issue with the institutions because they believed they were simply admitting weaker students. And one of the CAOs noted that race and class had become important campus discussion points with the changes in student demographics playing out in their student body.

Research question 2. How do participants negotiate the tensions (as expressed by the participants) between the liberal arts mission and financial challenges? A number
of responses were described by the participants in dealing with the tensions and conflicts of the institution. The interview questions proved effective at surfacing these responses along two lines: responses by the participants in their own roles, and responses by the schools at the institutional level as reflected by the respective CAOs and CFOs collectively.

The responses by the CAOs and CFOs occurred at two levels: individual and institutional. That is, the participants described their personal approaches to the challenges including leadership and change management. Not surprisingly, these were different across both groups, CAO and CFO. They also varied across the individual participants in the study. Common themes were identified among participants.

In the category of Individual Responses, the themes identified included Leading Change, Outcomes Orientation, Process Orientation, Relationships and Allies, Making the Case with Data, Transparency, and Collaboration and Leadership. There were differences between CAOs and CFOs in terms of the themes that were more characteristic of each group. In addition, CAOs were observed to be generally more complex in their style and approaches than CFOs. The characteristic themes and the differences between the groups are discussed in the following.

**Individual responses: CAOs.**

*Leading change.* A key distinguishing factor identified in the interviews involved commonalities and differences among the participants in their approaches to leading change. With regard to the CAOs, CAO1, CAO2, and CAO4 were all actively engaged in leading change in their institutions. Though their leadership styles varied to a degree, the two common characteristics they shared were: planning and implementing strategies
to accomplish important changes aimed at improving the institution in ways that would help ensure its financial health and survival, and building strong and compelling cases for convincing faculty of the necessity and urgency of those changes. As CAO2 described it, “In addition to rote expectations of a [CAO], I’m really here to push.”

CAO3 was an outlier in this regard, as well as in several other important ways. It quickly became evident that this individual was unusually deferential to faculty, and was not serving as a particularly strong agent for change similar to the roles described by the other three CAOs in the study. As noted earlier, CAO3 seemed conflicted about the relative priority of their own professional survival versus that of Institution-3. The high degree of deference to faculty revealed in this individual was also unusual as they simultaneously made note that faculty were not their only constituency of importance. In that regard, they actually listed the president and cabinet first when asked about their constituencies and the influences on their decision-making. CAO3 described their own role and leadership approach by saying, “I try to serve as an example of peacemaking.” They continued by saying, “My role is to be collaborative with the faculty, and to talk through decisions.” “I am not an axe swinger.” The style of this CAO was largely verified by the comments of CFO3 throughout that interview. For example, CFO3 noted, “That’s sort of the litmus test here. It almost has to be perceived as coming from the faculty.” Rather than moving forward with a sense of urgency to address the institution’s serious challenges, CFO3 in frustration described this approach as “whatever happens, happens.”

Outcomes orientation. From the information provided through their respective interviews, CAO1, CAO2, and CAO4 presented as strong and active leaders who were
outcomes-oriented. They each discussed working with other senior leaders at their institutions to create strategies and to set goals that would help improve the financial health of the institution while also strongly affirming their own commitment to maintaining the liberal arts foundations of their institutions. CAO1 described their role as a “facilitator” and stated that they wanted to improve shared governance at the institution. As they noted, it was “important to give faculty a voice.” However, this participant also noted that the institution needed to and would move forward under their watch in any case.

CAO2 and CAO4 had a number of similarities in approach. They could both well be termed seasoned and effective politicians with regard to effecting change at their institutions. It should be noted that in this use of the term politician, it is meant in a positive sense and follows the definition provided by Merriam-Webster: a person experienced in the art or science of government. These two individuals clearly understood the process of leading change as both a personal and organizational process. Both spoke of the enormous importance of building, maintaining, and using relationships with members of the campus community, particularly faculty, to achieve progress.

Relationships and allies. CAO2 and CAO4 both spoke of the importance of personal relationships not as a manipulative tactic, but rather in a way reflecting a synchronous process to both gather important information concerning constituents’ positions on and feelings about key issues, as well as to discuss, explain, and build support for key initiatives. CAO2 stated this very succinctly: “it’s about relationships and allies.” In very practical terms, this participant related that, “the majority of my time is spent building relationships and getting the information I need.” CAO4 described this
in a somewhat more euphemistic yet equally clear way: “You’ve got to sit down and drink a lot of tea and jawbone people.”

CAO1 was similar in nearly every way to CAO2 and CAO4. However, with regard to relationships it became clear from their responses that CAO1 did not want to rely on relationships to achieve support for key initiatives. The reason for this could be seen in four factors. First, CAO1 spoke of the way relationships had been used by key decision-makers previously at Institution-1 in an undesirable way and many times with poor outcomes. Second, the participant indicated that as a relatively new CAO, they were continually having to renegotiate personal relationships with faculty and others.

The third reason expressed by CAO1 for not using relationships was the need to be objective. As they noted:

Let’s face it, we all have our own bias, right? And sometimes we’re aware of that and sometimes we are not. My goal is to minimize any bias that I might bring to the equation by trying to rely on any data that I can that I think is more objective. The participant explained further:

Just things that I can use that I can point to that allow me to make decisions that don’t require me to have to… grapple as much with all that internal, personal, experience and history and tradition and perception of my own. And then that of others about me.

Making the case with data. The fourth factor provided by CAO1 for not relying on relationships also proved to be a key tactic used by both CAO2 and CAO4, as well. This involved the use of information to build a compelling case for change. CAO1 spoke
of using data to make the case for needed change, and then leadership to close that case. In the words of the participant, “With evidence the case makes itself.”

CAO2 described the way in which they “Put data in front of faculty, and ask them to confirm or argue.” There were a number of examples provided of using this tactic during their time at Institution-2, including improving student retention. As the participant stated: “So we had the data, it was in our fact book. I was like, why didn’t we do something about this? Why didn’t we act on this, with the data sitting right in front of us?” CAO2 also spoke of building a compelling case using information, and then ensuring that the support was there to make the needed change through conversations with key players. “Feel them out. Have that conversation.” With regard to key decisions, CAO2 described an important lesson learned from a former president they had worked for. “If you don’t have the votes, don’t do it. Don’t waste opportunities. Don’t let things die on the vine for lack of support or buy-in.”

CAO4 similarly described using information to build a compelling case and to build a sense of urgency. They noted the need to “have good, hard conversations with them.” As the participant stated, “I need them to understand how severe the crisis is.” When asked if the use of relationships was part of the process of building a case for change to enhance the information developed, the answer was, “Absolutely, absolutely. Absolutely.” CAO4 described the way they sometimes had to “buttonhole” people to create the opportunity for hard conversations. When asked to confirm that the process they were describing involved using information to build a compelling case and then working with individuals to build support for the needed change, CAO4 replied, “Yeah, exactly. That’s the only way that I can see to do it.”
Transparency. CAO1, CAO2, and CAO4 had yet another very important characteristic in common, and that was a strong belief in the need for transparency with constituents. CAO1 described the importance of “making sure that people have access to all of the data that they need to be able to conduct their own evaluation, follow along, appreciate what is or is not being considered.” As CAO4 described it:

At the end of the day I need to be ready, able, to make a decision. You know, this is what I’m going to do and why. But I’ve found that if I have those conversations with them and they know what I’m thinking and why I’m thinking it, they’ll accept my conclusions even if they don’t like them.

CAO2 added that they believed one reason their institution had gotten into trouble was that historically “it made budget decisions in secrecy.”

Individual responses: CFOs.

Process orientation. The CFOs in the study generally displayed a different approach concerning leadership and leading change. This is discussed in the sections below as well. Generally, CFOs were more process-oriented in their approaches. All of the institutions had some form of advisory committee to help develop recommended budget and financial decisions. As a group, the CFOs spoke to their responsibilities in ensuring that their respective processes were followed, that the participants completed their work, and that corresponding recommendations were developed and put forward to senior leadership of the institutions for consideration. Several of the CFOs discussed their roles in helping ensure that the institution controlled its spending appropriately, but they did not discuss an overtly personal role in doing so. Several noted that functional
areas of the institution should manage their own finances effectively and stay within their budgets.

CFO1 fit this pattern closely. They were significantly process-focused. This participant used phrases in describing their role that included: “I don't pretend to have priorities.” “Making sure that decisions get made.” “Being as open as possible. And just explain the problems.” “Kind of the back office.” In a way that was actually concerning to me during the interview, it became evident that CFO1 was not engaged to a significant degree with members of the campus community. This did not reflect active leadership. And in the context of this interview as well as the interview with CAO1, it seemed politically unwise to an uncomfortable degree.

Collaboration and leadership. CFO2, CFO3, and CFO4 displayed another dimension that involved more active engagement, collaboration, and leadership. As will be discussed below, however, the constituents involved in this engagement were somewhat more limited and more focused than those with whom the CAOs interacted. CFO3 was a bit of an outlier in this regard. Unlike CFO1 as noted above, CFO3 described being quite active on their campus, attending many meetings and functions including those involving faculty. This individual appeared to recognize and act on the political principle of engagement with constituents. They did not seem uncomfortable with their position at the institution, or their relationship with colleagues.

CFO3 did, however, exhibit considerable frustration with the inability to move things forward as needed at the school. CFO3 described a much less formal process for soliciting information regarding budget and finances at Institution-3. This was not by their design, and they spoke of the need to bring faculty more into these discussions. In
this regard, the participant was more involved personally in making budget decisions for the school. But they also noted that this was not their style nor their preference.

From the interviews with the participants from Institution-3, a general level of dysfunction at the institution was clearly suggested. This involved more limited collaboration than at Institution-2 or Institution-4, though more positive than that seen at Institution-1. CFO3 described the situation at their institution with phrases that included “gridlock,” “parallel play,” “different wavelengths,” “governance is separate,” “very dug in faculty,” “it’s been very hard to move those along,” and “whatever happens, happens.” CFO3 presented throughout their interview as a seasoned professional and politically aware. However, they simultaneously presented as very frustrated, resigned to the inability to help the institution address its serious challenges, and to have retreated to a position of submitting opinions and recommendations but not working actively to secure implementation.

CFO2 and CFO4 had much in common concerning their approaches. Both were process-oriented as noted. But both seemed to also employ more active leadership in their roles. CFO2 used expressions in their interview that included: “I’m a little bit more aggressive.” “Let's not continue to use what we’ve done in the past.” “I hit things head-on.” “There’s no tap dancing around it.” “If you delay it only gets worse.” “Get the people in the room that have to work on this, and come to a decision.” “Whatever has to be done.” CFO2 was one of the individuals in this study who had intentionally come to their current institution, and who was determined to help lead change and help their institution survive. Notably, they were also working for a relatively new president who was described to be moving the institution forward decisively.
CFO4 also employed a collaborative approach in their role. Institution-4 had a broad-based budget advisory committee. But CFO4 nevertheless indicated that they actively shepherded the recommended institutional budget through to completion: “I’m involved in it every step of the way.” They also indicated a willingness to push for change when necessary, and to confront resistance:

I think from my perspective the best way to deal with it is head-on. Whether singularly or in a small group of people who feel the same, is to sit down with the source of the tension and just try to talk it through.

The participant noted their engagement with the campus community, and their way of using “management by wandering around and having conversations.” CFO4 clearly understood and spoke of the need to build consensus and to have faculty “enfranchised” in their work. “I don't have the unilateral right to say ‘here's the budget,’ but that's not my style either.”

**Institutional responses to tensions and conflicts.** Beyond the responses of the participants themselves, another important category are the responses developed by the institutions as a whole, in which the CAOs and CFOs were found to play important roles. Participants reported a number of actions that the institutions in the study had taken or were considering in response to challenges they were confronting. Under the category Institutional Responses to Tensions and Conflicts the themes identified were Changes in Senior Leadership, Reaffirmation of a Liberal Arts Focus, Strengthening Student Retention, Evidence-Based Decision-Making, Faculty Engagement, More Formalized Institutional Processes for Decision-Making, Academic Program Diversification,
Academic Restructuring, Cost Cutting and Operational Efficiencies, and Maximizing Student Recruitment. These are discussed in the following.

*Changes in senior institutional leadership.* A pattern that emerged at the institutions involved a change in senior leadership at the schools. Three of the institutions had relatively new presidents, all well under five years. The president at one institution had been there for over ten years. The culture of the institutions in this study appeared heavily influenced by the tone of the new presidents, with all of the institutions with relatively new presidents emphasizing structural changes in an expeditious manner as reported by the participants. The institution with the president having been in office for over ten years was notably not pushing forward for significant changes, as indicated by the CFO, and to a somewhat lesser degree by the CAO as well.

The new presidents at the participating institutions had also engaged in changing out the senior leaders of the institution reporting to them, including but not limited to the CAOs and CFOs. At two of the institutions with new presidents, the CAOs had been replaced, and at the third institution the president had changed the responsibilities of the CAO substantively and reaffirmed their support for the CAO, at least in the short term. A nearly identical situation existed with the CFOs in the study. Indeed, more information pertaining to the change of senior leaders was learned in the study than can be provided in this report in order to protect the identity of the individuals involved.

Two clear patterns were identified through this research as related by the participants interviewed. First, the president of the institution played a major role in setting the overall tenor for the institution including direction, tone, and pace of change. Second, the new presidents were not reticent to change out their cabinets in order to move
the institutions forward. And when the presidents sought new members for their respective cabinets, the message conveyed by the participants was that the presidents sought leaders who could and would move the institutions forward with fundamental changes in short order. One of the institutions with a new president related that the president had already changed out their entire cabinet.

Reaffirmation of a liberal arts focus. All institutions in this study had previously reaffirmed their support for the liberal arts focus of the institutions. All CAOs in the study and all but one of the CFOs spoke of the continued commitment of their institutions to a liberal arts education. Only CFO1 did not talk about this during their interview. CFO1 seemed overall to be removed from the mission of the institution. Even when asked how adherence to a liberal arts mission played into their decision-making, they struggled to make the connection. All other participants discussed the role of maintaining the liberal arts focus of the institution in clear and substantive ways. CFO4, however, spoke to the connection in a compelling way. This participant described mission as “our first bottom line.” Then stated, “Financial performance is our second bottom line.”

At the same time, it must be noted that while the institutions were strongly reaffirming their commitment to the value of a liberal arts education, they were simultaneously redefining how the liberal arts would play out with regard to academic programs. Only CFO1 did not speak to the changes underway with regard to restructuring courses, programs, and majors, at both the graduate and undergraduate level at the participants’ respective institutions.

CAO1, however, described this process in detail:
So, adherence to mission, the mission of the institution has changed, but liberal arts at its core, always. Despite a number of growing professional programs. So I think that we are regularly revisiting the mission for the purpose of making decisions that are going to keep us, if you will, on track. Helping us strike that balance between the liberal arts essence of who we are, and the professional programs that we are strengthening and developing. So I would say that mission is important and we regularly revisit the mission, at least for the purpose of decision-making.

This topic is discussed in more detail below concerning the diversification of academic programs.

CAO2 reported that at their institution:

Yeah, and I guess, thinking about how do we understand what the liberal arts are. Is it this conglomerate of interdisciplinary courses that is the foundation of the Western Canon, is it that, or is it an understanding, a broader understanding of different disciplines and different skillsets? I mean, I think we’re not all functioning with the same understanding of what liberal arts really are.

*Strengthening student retention.* One of the areas that had proven problematic for the institutions in the study was student retention. This problem was described by both CAOs and CFOs as an academic as well as a financial problem for the school. Student retention was reported to be a problem at all four schools, particularly Institution-2 and Institution-3 where improving student retention was among the highest areas of emphasis as described by both the CAO and CFO. CAO2 was highly focused on improving student retention to the point that efforts in this area were used as examples in answers to
questions throughout the interview. CAO2 described an institution-wide response they
had mounted to address this issue, including assignments they had made to both faculty
and administrative staff members with numeric goals of the number of students the
school needed to keep. CAO2 spoke of knowing where each student was at the school at
any given time, and being able to reach out and put your hands on each student. In their
words, “We literally can know where every one of those kids is at any moment.”

CAO3 also spoke to the criticality of this problem for their institution, describing
their student retention problems as a “matter of public record.” CFO3 described internal
reorganization and reallocation of resources in order to strengthen student academic
support as well as to improve student retention. In their words, “We also spend huge
amounts of money on tutoring and supplemental education services for our students. We
spend like a million dollars a year, which is a huge amount of money for us.” The
participant listed a range of support functions, and provided a surprisingly high figure for
the number of people employed in these functions at the institution.

Institution-4 reported taking steps to improve retention, though it was
simultaneously noted that improving student recruitment was an even larger problem at
this school. Institution-1 reported already having made significant improvements in the
area of student retention prior to the start of this study. As CAO1 reported, “Cause we’re
bringing in more students and we’re keeping more students.”

Evidence-based decision-making. Another area of strong convergence among
both the participants and their respective institutions was the move toward more
evidence-based decision-making. The participants noted with specific examples the way
that more data and information was being sought to guide and support decisions. There
was some degree of variability in the responses, with CFO1 speaking to the way they contended that data had been used to support their decisions for some time. However, CAO1 strongly countered this assertion during their interview. This participant stated that it was their perception that the finance function had represented that their decisions were heavily based on data and information, but that they strongly felt this was not the case. When CAO1 was asked about their perceptions of the financial decisions that had been made and whether they had seemed to make sense, the participant quickly replied:

“It did not make sense. Unh-uh. We have the data in some instances, and in some instances there is a complete lack of data. And in other instances there is just a complete lack of having data-driven decision-making. So, it isn’t entirely clear why decisions were made, especially in terms of allocation. Very few of them I’ve looked at said, ‘that really makes sense to me.’”

It should be noted that in conversations and under questioning about the types of data they used to make decisions, CFO1 struggled to list anything of substance.

With regard to structured information, the institutions were widely challenged by old technology, underperforming systems, and data integrity issues as described by the participants. Participants from all four institutions spoke of these problems and efforts to resolve them. As a result, all of the CFOs reported reliance on spreadsheets for much of their information, and correspondingly noted the lack of confidence they had in this information as it was from multiple sources and of questionable accuracy. As CFO2 noted, “But the reporting here, I mean I thought [a previous institution] was bad. Getting information… everything is spreadsheet-driven here, which is scary.” They continued
by noting that the use of spreadsheets instead of system-generated information “just make me very nervous.” They also noted that this often resulted in multiple versions of information.

And then you look from one sheet to the next and if there’s differences, and you say ‘oh my god, which one is right?’ ‘What am I doing here?’ That’s the scary part. Cause we prefer to be data-driven in our decision-making, it’s just the data is shaky.

But at the same time, the participants reported that the institutions were looking more broadly for information as well as ideas. Several CAOs in particular spoke in terms that suggested they realized their institutions had been quite insular in the past. And as CAO1 stated, “we’ve also been doing a bit more of, trying to get outside of ourselves.”

Beyond structured information, the schools were looking for unstructured information from a variety of different sources. This included more focus on surveys, focus groups, and various qualitative approaches. But it also involved actively engaging with constituents to gather information, as noted above. CAOs in particular described seeking information from a variety of different sources, including organizations outside of higher education.

CAOs generally also noted the ways in which the presidents required evidence to support recommendations and decisions. As CAO4 recounted:

“And [name], my president, is a real data hound. So [they] want really high quality data. And [they’re] all about, you know, [they’ll] say to you ‘that’s a nice opinion you’ve got there, but you’ve got not a shred of evidence to back it up.’

You know, so ‘what’s the benchmarking on this? Show me what other institutions
are doing. When you’re complaining to me about the size of this or that, give me our peer institutions, give me what their sizes are so I can see a number.”"

Three CAOs described the way in which presidents maintained networks with others outside the institutions by which they actively sought information and new approaches to problems. CFO2 noted this during their interview as well: “Well, [name]’s very aggressive in talking with other presidents. [They’ve] got a broad network also, so [they’re] always checking with other people to get information on how they do certain things. And that’s brought to the table in decision-making.”

An area of significant focus and change at the institutions with new presidents was the Institutional Research function. This was typically described as an area that received heightened focus as the schools became more data-driven. The participants from Institution-1, Institution-2, and Institution-4 almost universally implied that Institutional Research functions had previously received little to no attention and had played much lesser roles in providing information to support decision-making until new presidents arrived. This topic is dealt with in more detail in RQ5 below.

*Faculty engagement.* Seeking greater collaboration with faculty in finding ways to move the institutions forward was consistent across all four schools. This was discussed substantively by all four CAOs as well as CFOs from Institution-2 and Institution-4. However, it is important to note that the engagement and collaboration with faculty did not translate to strengthened shared governance. A clear distinction was made in this regard across all institutions. Because this area is directly linked to the research question involving constituencies and the role they play in decision-making, this topic is addressed more fully in RQ3 below.
More formalized institutional processes for decision-making. As noted above, a factor that played into the tensions and challenges faced by the institutions as related by the participants was unpreparedness for the conditions they now faced. One of the areas that was mentioned in this regard was the way in which many decisions were made informally and in the absence of data upon which to support the decision-making. As described above, CAO1 spoke of the way in which at their own school decisions had long involved “a lot of trust and faith put in relationships” as well as “a lot of trust and faith put in the history and tradition and the way things have always been done.” In contrast, all participants in the study described new structures and processes that had been and were being implemented in an effort to make decision-making more transparent, more evidence-driven, and more participatory with representation from the campus community.

Budget advisory committees were among the most commonly mentioned structures in this regard, though other factors were also mentioned including strategic plans, admissions committees, retention committees, and faculty senates, among others. Three of the institutions had implemented budget advisory committees with members representing the campus community including faculty. The names of the functions varied by institution, but the purpose and function was generally consistent. These committees were intended to develop operating, and in at least one case, capital budget recommendations on behalf of the institution as a whole. Generally, the recommendations were then forwarded to the president’s cabinet for further consideration, and then to the board of trustees for approval.
Although the budget advisory committees were generally well-reviewed by the participants, there were exceptions. Not surprisingly, the exceptions occurred at the two institutions in which the relationships between the CAO and CFO were less than positive: Institution-1 and Institution-3. CAO1 stated, “I think that the CFO was, and has been, given decision-making authority. In a way that has resulted in less collaboration and consultation.” In a particularly candid moment during their interview, CFO1 reported that complaints had been filed with the president concerning the budget process at their institution. At Institution-3, CAO3 complained that it was their impression that CFO3 was hired “to be a watch person to keep us away from returning to that [history].” However, to CAO3’s credit they added, “We both want what’s best for the institution. We have to find middle ground.”

*Academic program diversification.* A very important adaptation noted at all four institutions involved what has been widely reported as a shift in liberal arts colleges to providing more professional and career-minded programs, as well as graduate programs, as discussed in Chapter 1 and Chapter 2. The pattern held true in these institutions as described by the participants. This move was in direct response to the changing marketplace of higher education regarding the programs that parents and students were seeking, as well as the need to create additional tuition revenue to support institutional operations. In all cases, the institutions reported that this diversification was being done while adhering to the liberal arts mission of the institution. In fact, it became clear that this move actually was a way of ensuring the continued ability to provide liberal arts-based education at the schools, particularly but not exclusively for undergraduates.
As CAO1 described this, we are trying to “strike that balance between the liberal arts essence of who we are, and the professional programs that we are strengthening and developing.” CAO4 stated that:

My mandate is to try to develop what I’ll call “plus 1” programs, you know, basically. So to make the graduate program, which is very humanities focused, a little bit more… Not to lose the humanity character totally, but to try to look for graduate programs that grow kind of organically out of the strength we have in the [institution].

Even Institution-3, which was not pursuing fundamental changes to the extent being sought at the other institutions, was employing the same response mechanism. CAO3 stated, “[Institution-3] has been slow to develop new programs but we now have several new ones. Three new master’s programs. We are looking to innovate.” They simultaneously noted that faculty at the school were concerned about this direction by the institution. CFO3 also spoke of the move to more market-oriented programs. “We have some co-programs with [public university].” The “faculty is very cognizant of career need.” The participant, who spoke with commitment to the value and importance of liberal arts education, provided a very practical explanation for this approach:

So for me what resonates is having students the ability to get the opportunity to learn and develop their skillset. Now, if they can get you know, a business skill or a nursing skill, I mean certainly if you are going to become a nurse you’ve gotta get a nursing degree. OK, I can live with that personally.

**Academic restructuring.** All institutions in the study were also well aware of the need for academic restructuring and finding ways to offer needed academic programs as
cost efficiently as possible, as expressed by the participants. This included a range of noted options including program consolidation, departmental consolidation, eliminating programs, and revisiting the core / gen-ed curriculum, among others. The need for this was discussed by all eight participants. However, the awareness of the need did not translate to action in every case.

CAO4 spoke directly to finding areas “where we can cut and streamline and gain some academic efficiencies.” Institution-1, Institution-2, and Institution-4 were pursuing a range of options in an intentional and coordinated way. Characteristically, however, Institution-3 was more conflicted and conservative in this regard as expressed by CAO3 and CFO3. As CFO3 noted:

We haven’t touched faculty, we’ve kept the faculty. All the programs have been kept intact. But they keep continuing to offer more and more sections, so we say to the [CAO], you know, you’ve got to control that, and they’re like ‘why?’ And, well why do you keep ordering more sections for the same number of students?

CFO3 also related in response to a question of whether the institution had engaged in any academic program reviews, “Uh, we did at one time with the predecessor of the current person and that whole concept was rejected.” When asked if it had been rejected by the faculty, they replied that no, it had been rejected by the CAO. In frustration, CFO3 stated, “So I think there’s sort of a bit of gridlock here in terms of looking at those key issues.” During the interview with CAO3 in this area of questions, the only two somewhat substantive statements were, “We are looking to innovate” and “I am continually looking where to allocate and reallocate faculty vacancies.”
The other institutions in the study did not share the same reticence in this regard. And it was not merely the CAOs who spoke to this. CFO4 related, “We’re spending a lot of time looking at, trying to understand sort of the expense burdens of the institution.” They added, these expense burdens:

Are never just one big… I mean it’s dozens and dozens and dozens of programs, some of which have been running for decades and nobody’s ever looked at them. So it’s not like we’re on a witch hunt. We’re trying to be very rational. We’re using the deans and their immediate associate deans or assistant deans to help us identify instructional and non-instructional programs and we’re putting together mini P&Ls over multiple years. And we’re looking at those programs and we’re trying to get a sense of what the expense burden is. Not to eliminate the burden but to reduce it, or to look at that expense burden and to say, is that really still mission-critical? It might have been 15 years ago, but is it now?

CAO1 reported that when the relatively new president had arrived, a discussion about program prioritization was begun. “So yeah, we’re talking about exactly that. Right. So we have not done a really good job of developing a process or plan for evaluating programs meaningfully. At any point.” The participant continued, “That is something that we are looking to do.” The participant went on to explain that this was a significant part of the strategic planning process the school was undertaking, that a consultant had already been retained to assist with the process, and that a nationally recognized model had been adopted to guide program review at the school. CAO1 also reported that the school had already initiated a review of the core curriculum. As they stated:
“And even within the faculty, when we’ve revisited the core curriculum a few years ago, and [we] asked faculty to consider any changes they might want to make to the core or consider, just a reaffirmation of the core that we have, or a change in the core. Even amongst and within the faculty there was some discussion about the need for a literature course, right?”

Institution-2 had also made significant progress concerning academic restructuring, as reported by CAO2:

“Even our own general education component is not a traditional gen-ed. It isn’t the à la carte model of, you know, twelve credits in this, eight credits of this. It’s all consolidated in a general education core which everybody takes and it’s across the whole spectrum from the freshman year to the senior year.” They added, “So even here, it’s not your traditional approach to general education and the liberal arts base.”

Cost cutting and operational efficiencies. One of the realities of the financial challenges the institutions had experienced was previous cost-cutting, some of which had included staffing reductions and reductions-in-force (RIFs). However, there were two interesting aspects to the way in which this was revealed in the interviews. First, it was clear that this was not at the top of the minds of the participants. While the participants were not reluctant to speak of this, the substance of the interviews dealt with challenges that seemed more substantial and forward-looking for the schools. The second interesting aspect involved this last point, which was that most of the cost-cutting had happened previously. It was conveyed almost clinically as something the schools had
experienced, but it clearly was not at the top of the participants’ minds looking forward, particularly the CAOs.

The one exception to this pattern involved Institution-4. For reasons specific to this institution, serious cost-cutting and staffing reductions was not historical. In fact, CAO4 related that this was not a significant point of discussion at the school for senior leadership. However, CFO4 pointed out in their interview that the institution was being very deliberate and thoughtful about reducing costs. The participant noted that the board and president at the institution had determined several years previously that “we were not gonna turn the ship around by Draconian cuts. Uh, massive layoffs.” They further noted that:

So it’s going to be a bit of a challenge for a few more years, but it’s a good board, a strong president, and we’re doing some strategic expense reductions but nothing Draconian, no layoffs, nothing like that. We don't wanna impact either the morale or the DNA of the place’s ability to move forward. So, slow but steady.

CFO1 reported at their institution that other actions had previously been taken including sale of some institutional assets, reduction of staffing, and internal reallocation of positions. The participant noted that cost-cutting was becoming increasingly difficult and was being resisted by other leaders at the school. As they described the situation, “I can’t cut that service. I can't cut insurance. I can't cut depreciation. I can’t cut health benefits without firing people.” CFO3 similarly reported reduction of staffing and internal reallocation of positions. Both CFO1 and CFO3 reported that there had been unintended consequences to staffing reductions and reallocation of positions. In both
cases, other problems had developed that later had to be dealt with due to important institutional responsibilities not being fulfilled.

Maximizing student recruitment. As noted in RQ1 above, a number of factors were acting together to threaten student enrollment at the institutions. These included changing student demographics, increased consumerism and concerns over return on investment regarding a liberal arts education, student retention problems, and increased difficulty recruiting students in the face of declining affordability and greater competition from other institutions including publics, among other factors. Several participants also mentioned economic conditions generally, and specifically the economic downturn of 2008. All of this contributed, along with increasing operational costs, to a decline in net tuition revenue.

Because all of the institutions in the study were highly dependent upon tuition and fees for their operating budgets, this created increasingly difficult financial circumstances at the schools that threatened their survival. As CAO4 described the situation at their institution:

Well, I would say that my sense of it is that we are in the middle of a perfect storm here. And that there are two dimensions of that storm. One dimension is a national phenomenon that is affecting higher education as a whole. After further details in this regard, the participant then added, “And then there’s the level of the perfect storm which is of [Institution-4]’s own making. So bad decisions were made over a period of time.”

One of the responses at all four schools in the study as referenced by the participants was maximizing student recruitment efforts. This played out in a number of
ways, but an important step taken at two schools was the hiring of high-caliber heads of student recruitment. For example, Institution-4 had recruited an individual who had previously been highly successful at other institutions to improve recruitment at Institution-4. Both the CFO and CAO noted that significant improvement was being made. Background research also showed that Institution-1 had a respected professional in this position. At Institution-1, the CAO reported that the school was seeing strong progress in both admissions and retention. The school had just enrolled a larger class than projected, and retention was much stronger than in the past. As CAO1 noted, this showed that things were working in these areas, “Cause we’re bringing in more students and we’re keeping more students.”

A fundamental component of stronger enrollment, as discussed in other sections of this report, was finding ways to “sell” the value of a liberal arts education. All CAOs reported being heavily involved in this effort. CAO1 stated the challenge in this way:

The value of a liberal arts education has to be reiterated for them, it has to be reinforced for them. I think they have to be told with some degree of regularity what value the liberal arts component of this education brings, because by and large they don’t come here seeing that. They are far more oriented around professional studies.

The participant stated that the main concerns of prospective parents and students was a career and getting a job. In their words:

And so this talk of broadening your… building you communication skills, or developing critical thinking skills, you know. I’ve even had students and parents
alike say well why do we need math? Right? Why do I have to take a literature course?

All four CAOs described efforts to employ multiple ways to create a compelling case to sell the value of liberal arts at their institutions. This included speaking to the skills employers are seeking and how the school could provide those skills, data to show the success of graduates, specific programs or training at the schools that differentiated them from competitors, and similar factors.

One other response reported at Institution-1 and Institution-2 involved board of trustee members who had not been effective in helping the institutions respond to their challenges. In both cases, references were made to work by the presidents to improve the boards and strengthen the membership.

**Research question 3.** How do participants define their constituencies and what role do they play in participants' decision making, particularly in the context of shared governance? The CAOs and CFOs in the study differed in their accounts of constituents and the roles they played concerning decision-making. These differences proved significant in understanding the ways the CAOs and CFOs went about their work at the institutions. In addition, the nature and role of shared governance proved an important issue for the institutions in the study. Constituencies of CAOs and CFOs are both discussed below, as well as the issue of shared governance at the schools.

**Constituencies of CAOs.** When the CAOs and CFOs were asked to discuss their constituencies and the role that they played in their decision-making, the results showed a degree of variability among all eight participants, and were also somewhat surprising. CAO1, CAO2, CAO3, and CAO4 all listed students as their first constituency. As CAO1
stated, “The students. The students are the first group that are in my mind.” CAO3 described their constituencies as, “Students, families, the state, Middle States, employees – not just faculty.” This was somewhat surprising, yet affirming, insofar as the way in which this may have also indicated recognition of the primary role of the institution to serve students.

A number of other constituencies were referenced by the CAOs in their responses, including faculty, presidents, other administrators and executive staff members, boards of trustees, alumni, direct reports and staff members. Faculty were typically the second constituency listed by CAOs in their responses. As CAO1 noted, “faculty are a very close second in terms of the strengths and the skillset of our faculty as a body. Sort of our collective spirit, if you will.” Taken as a whole, the general pattern among CAOs was that students were first in their minds as constituents when making decisions, and faculty were generally second. However, as noted by CAO2, “It’s really situational.”

**Constituencies of CFOs.** The CFOs in the study displayed more variability in their answers to the question of their constituencies and the role they played in their decision-making. Students were not listed among the top constituencies of the CFOs, which was not surprising as a CFO could be generally expected to interact less with students personally than a CAO, and to be more personally removed from the factors regarding the impact of decisions. Though the decisions made by the CFOs clearly had a significant impact on both academic programs as well as students, students were not listed among important constituencies.

CFO1 and CAO3 both listed the president of the institution as a primary constituent who played an important role in their decision-making, which was not
CFO1 noted that an important component of their job was to keep the president informed, and ultimately to implement their wishes insofar as budgetary decisions.

CFO4 also listed the president as among their constituencies, but surprisingly stated, “One of my primary constituencies, if not my primary constituency, are the faculty.” The participant explained that this was largely because if the faculty were “not enfranchised” in what they did and the decisions they made, the results would be more difficult.

Among the other constituencies mentioned by CFOs were other members of the cabinet, and particularly other senior officers with whom they interacted frequently on important issues. Direct reports and staff members, members of budget advisory committees, and board members were also mentioned. With the exception of CFO4, CFOs were generally less differentiating with regard to faculty members. Taken as a whole, the other CFOs were more prone to talk about members of the campus community at large rather than mentioning faculty as a separate constituency.

**Faculty and shared governance.** Shared governance proved a very interesting topic among the majority of participants in the study, including all CAOs and two of the CFOs. One of the most interesting elements to surface from the interviews was a general theme concerning how to define shared governance and what role it should play in institutional decision-making. As a group, the CAOs were far more likely to consistently involve faculty into their decision-making. This is not surprising since they were more proximal to faculty in several ways. However, the CAOs were also more circumspect with regard to shared governance than expected. While they were generally quite
committed to engaging faculty in decision-making, a clear distinction was made with regard to a connection with formal shared governance. The general pattern that emerged was much more one of engaging faculty through relationships and discussions with individual faculty members and small groups, rather than dealing with faculty as an organized body.

Several reasons for this emerged from the interviews. One of these seemed to be a level of distrust that had developed between faculty and the administration of the schools. While this would certainly not be considered uncharacteristic of the relationship at many schools, at these private liberal arts colleges one common factor seemed the cumulative events over recent years in which the institutions had fallen on increasingly difficult financial times. CAO4 described this in a thoughtful way:

The faculty is the interesting one because it’s the one that is constant, relatively. The students come and go every four years, the parents come and go every four years. The administration turns over – [numbers omitted], so you know, they change. Administration changes, staff changes. But faculty remains relatively constant.

In the context of the interview, one of the things conveyed by this was the way that faculty had seen the different changes in the school over a number of years.

CAO2 had a similar perspective:

You know, with the faculty, our faculty have typically been here an average of 16 to 20 years, so they are lifers. They’ve been at the institution, this is primarily the only institution where they have worked, which can be a good and a challenging thing. And you know, the good thing is that they are committed to the institution.
They love the institution, they believe in the institution’s mission. The challenge of course, though, is that they believe in an institution that might not still exist. You know, they believe in the institution of yesteryear. Umm, and they also don't necessarily have the exposure to the reality of higher education in general.

As mentioned above in RQ2, CAO1 had noted the importance of “giving faculty a voice.” But they also made clear that there was a distinction between collaboration and consensus. CAO1 stated that with regard to faculty, they had to “help them recognize that consensus may not be the end game.” “I don’t know that I can ensure consensus, I don’t know that it’s my job to do that. I don’t know that that’s a possibility.” With the exception of CAO3, the aspects of whom has already been discussed above, the other CAOs generally made clear that their respective institutions would move forward, whether faculty buy-in did or did not exist concerning key decisions. All CAOs made clear that having faculty buy-in and support was preferable. But with the exception of CAO3, they did not indicate that this would be a determining factor. In this way, CAO1, CAO2, and CAO4 seemed to be more outcomes-oriented than process-oriented. They discussed in detail their efforts to engage with faculty and build support for key initiatives. But simultaneously, they consistently and clearly indicated that institutional survival superseded lack of faculty support.

The other theme that surfaced from the interviews with representatives from all four institutions was the question of what shared governance actually was. As CAO1 observed, “I think that the nature of what shared governance is, I think that we’re grappling with that in higher education.” As CAO4 explained the situation at their own institution: “For faculty it’s like we get 100% of… It’s out of touch with reality, and it’s
not a good way to make decisions ultimately at the end of the day.” They continued:
“It’s a huge impediment to progress here because we’re not on the same page about even
what the term [shared governance] means.”

CAO4 went on to note that, “We use this term shared governance and we don’t
know what it means. Or we all have very different definitions of what it means.” The
participant stated that they had recently read a book that dealt with this question in a very
effective way. CAO4 said that the author had presented three different ideas on what
people thought shared governance meant: totally equality between the faculty and the
administration in every decision, consultation with faculty but with faculty having no
ultimate vote, and boundary-setting with designated respective responsibilities. But they
stated that the authors premise was actually, “What it really is, is a systems approach to
aligning ideas about mission and strategy.”

CFO3 described shared governance at their institution as, “I would say
governance here is separate governance.” “I think that there’s parallel play.” The
participant described the faculty at their institution as “very dug in,” distrustful, and
resistant to change. They continued:

So it’s like… Like a pet snake, or something like that. And you know, you get
bit too many times… Again, you do the best you can. You take on the issues that
you can take on but in terms of these [difficult issues]…

The participant described it as the administration and the faculty being in different places.
“We kind of meet sometimes. But we’re on different wavelengths.” CFO3 also reported
that the administration at the institution consistently took a “light touch” with the faculty,
for fear of “starting a war.” Yet as this CFO noted:
Let’s put it this way. As I sit now at [Institution-3], is that given our finances there are a number of things that we desperately need to do now. Like the house is on fire. And it’s been very hard to move those along. Very hard.

CFO4 spoke in terms that, while not speaking directly to shared governance, described a sense gained from nearly all participants in the study concerning working with faculty at their respective institutions:

“You know, it’s not my phrase, I didn’t coin it, but it’s management by wandering around and having conversations. I particularly, with faculty, I find that very, very helpful. The feedback I get is that they appreciate it and they find it equally helpful. And you know there’s so much, as you know, there’s so much nuance to running a small university like this. So you pick up on the nuance. And I get to share some of the nuance from my perspective. So it helps.”

CAO2 similarly provided a very practical side to working with faculty in their comments:

“Well, and again, this is a new structure for us, they never had like a shared governance structure. But that was what I tried to get them to understand. It’s shared governance. It’s shared. It’s not faculty governance that the faculty gets their way this time, and then I’m gonna get my way next time. You know, it's all about the relationship. It’s all about sitting around the table, hashing it out, what are you OK with, what are you… And it’s like you know, if both people leave miserable and disappointed we probably did the right thing. You know, cause we didn’t quite, neither of us quite got our way.”
Importantly, even in the absence of shared governance, nearly all the senior officers in this study spoke of the positive role that engaging with faculty in decision-making contributed to better outcomes. As CFO4 stated, “I mean, I really like to build consensus. I think it’s a very time-consuming process and can sometimes be maddening. But I think at the end of it all you’ll end up getting a better resource allocation model.” At another point, CFO4 said:

And you know, faculty here, I mean it’s a dynamic faculty. You know, my first impressions of them are they’re just a great group of people. And that doesn’t mean everybody always agrees. But, I’m finding people very receptive to good information that’s shared with them genuinely.

While CAOs were not reticent to express their tensions and frustrations during the interviews, this was not surprising given the nature and magnitude of the challenges their institutions were facing. However, similar to the Stockdale Paradox (Collins, 2001), while confronting the brutal facts these individuals nevertheless expressed positivity in their approach and determination and optimism in their outlook. Even while expressing frustration with not being able to move key changes and initiatives forward as quickly as required, they expressed a positive outlook, and an appreciation and compassion for constituents, and particularly the faculty member of the institutions.

**Research question 4.** How does a participant's identification as CFO vs. CAO inform their decision making? A very close and iterative evaluation of the information gained through the interviews revealed differences in the ways that CFOs and CAOs approached leadership, change, and decision-making.
**CAO decision-making.** Generally, CAOs were much more politically engaged with constituents across the institution than CFOs. As already discussed, they focused on building and maintaining relationships and used them synchronously for dual purposes: gathering information to support their reasoning and decision-making, and building support among key constituents for important initiatives and changes.

CAOs were also more engaged programmatically than CFOs in many areas of the institutions. Not surprisingly, this was particularly true of academic programs, student recruitment, student retention, and similar areas. This is significant, because it reflects the fact that the academic areas of the institution are those that produce the financial resources, the revenue, that supported the activities of the schools. CFO3 referenced this in a very interesting way. “The things that are really going to help us aren’t under my control.” This reflects a key component of the relationship, the responsibilities, and the decision-making by the CAOs and the CFOs. While in the best of circumstances, the collaboration between these two senior officers yielded plans that were better developed and better executed, the CFOs were dependent upon the CAOs in key ways relative to implementing changes that would fundamentally and structurally improve the financial health of the institution.

**CFO decision-making.** At the same time, CFOs played a very important role in formulating key decision points for the CAOs. For example, they provided essential information concerning the availability of resources to support existing and new initiatives. The words used by the CFOs to describe themselves and their roles were quite interesting in this regard. For example, CFO2 stated that “In the end, I deliver the reality.” CFO4 related that “I’m the interpreter.” CFO2 and CFO4 both seemed clear
and confident in their roles and responsibilities. In addition, CAO2 and CAO4 both spoke of their financial counterparts in positive ways. All four individuals described their respective relationships in terms that conveyed a positive, collaborative, and functional interaction. Reflecting this type of relationship, CFO2 said:

[The CAO’s] challenging, cause [they] want a lot of things, and everything makes sense. You know, the problem for us is everything makes sense. You know, so where do you stop? And that’s my job, to say, ‘Hey, look, this is how much we have to spend. And what are the things that are really important to you?’

CAO / CFO conflicts. The relationships between the CAO and CFO were also revealed to be different in the study. At two institutions, the CAO and CFO reported working well together in spite of the tensions and conflicts they were facing. However at two other schools, the relationship between the CAO and CFO was less positive and collaborative.

CFO1, as already discussed, seemed removed from the mission of the institution, and appeared to have had relatively little engagement with the members of the campus community. Correspondingly, CFO1 described their role as “kind of the back office” at one point of the interview, and as “kinda the service backbone” at another point. By all indications beyond the words used by CFO1 dismissively, the relationship between CFO1 and CAO1 was relatively superficial, involved little collaboration, and was less than well-functioning and effective. Indeed, the lack of confidence and trust expressed by CAO1 for CFO1 and the decisions being made were apparent in the following comments:
I’d describe it, you know, to friends and family outside of higher education this way. I feel like we don’t have a financial problem, we have an allocation problem. Right. We’ve got money, we just need to allocate it differently.

As illustrated by comments made by both individuals, the communication between the two was poor, and in turn the decisions and execution involved in key operations at the institution were compromised as a result.

Although the relationship between CAO3 and CFO3 was not altogether trusting and positive, both individuals indicated there were trying to work with the other. The communication was better than that described for the officers at Institution-1, but the decision-making and execution surrounding key initiatives was clearly less than optimum and served as a significant source of frustration to both. Institution-3 seemed to be moving much slower and more conservatively regarding changes at the institution relating to improving net tuition revenue. Whether this was primarily the result of the senior officers, or the culture and tradition of the institution, would be difficult to determine.

**Constituent influences.** CFOs and CAOs also generally identified different constituencies that played into their decision-making. CFOs were more likely to identify the president, cabinet members and other senior leaders, direct reports and staff members, and board members, as constituents. Faculty were also listed as a constituency by all CFOs except CFO1. Surprisingly, CFO4 stated that the faculty was “one of my primary constituencies, if not my primary constituency.” CAOs were generally more likely to identify students and faculty as their main constituencies, with students generally considered at the forefront of their decision-making. A fair interpretation could be drawn
from the interviews with the CAOs that decisions were very often made for and in the perceived best interests of the students, and that faculty constituted an important consideration for how to implement those decisions. Again, this is not to say that faculty were not actively engaged in the formulation of the decisions made by CAOs. But the way in which students were described as their first constituency, and the way in which they described working with faculty to implement decisions, was telling.

CFOs also used words and phrases themselves, and correspondingly their CAO counterparts used words and phrases, that suggested one function of the CFOs was as a kind of control-point on spending. It was also made clear by the CAOs and CFOs that the CFOs were key influencers in funding decisions. As noted earlier, budget advisory committees were utilized by the institutions to ensure participation in resource allocation decisions. But information concerning how much money was available to spend typically came from the CFO. CFO1 described one of their primary roles as “to make sure that the rest of the [institution] has the resources to do as much as possible.” CFO2 described this as, “it's keeping expenses in line with the measured revenue growth – how much money we have to spend and what is most important to you?” As the participant noted, “I’m not a big fan of budget advisory committees, but I get it.” CFO3 related that they believed it was important for members of the institution to consider the institution as a “business enterprise.” “Cause that’s what I think it takes.” CFO4 stated their belief that the participatory process represented by an advisory committee was important, and that “I think at the end of it all you’ll end up getting a better resource allocation model.” However, reflecting the way in which all four CFOs considered themselves responsible
for the finances of the institution, CFO4 also noted, “I’m involved in it [financial
decision-making] every step of the way.”

*Emotional intelligence.* Another aspect of the CFOs I detected in this study and
of importance in interpreting their leadership, change management, and decision-making,
is the level of emotional intelligence among three of the participants. The CAOs in the
study had generally displayed an understanding and appreciation for their constituents on
a personal level. They spoke to this throughout their interviews, noting their care for
students and faculty in particular. They also spoke to the ways in which they considered
the impact of changes on their constituents from an emotional level. However, the level
of emotional intelligence displayed by three of the four CFOs in the study was surprising.

CFO2, CFO3, and CFO4 displayed through their interviews that they very much
had constituents in mind as they fulfilled their responsibilities. This did not involve
merely a rational or mechanical way of looking at the campus. These individuals spoke
to the members of the campus community as people with hopes, concerns, and goals.
CFO1 displayed this to a lesser extent. This is not to say that emotional intelligence was
absent, but it became clear that this individual approached their role with less
consideration for the impact of changes on a subjective, emotional level.

The three CFOs referenced in the preceding all spoke of walking around,
intentionally engaging constituents for conversations. Further, they spoke of this in terms
of dialog that enabled them to both gather and provide information that included issues,
problems, needs, and possible responses the institutions might make going forward. As
already described, CFOs spoke of the importance of “hard data” that, when available,
provided a more objective and reliable basis for decision-making. However, they also
spoke of the way in which information concerning campus constituents provided a very important “qualitative overlay” that enabled emotional intelligence and more holistic reasoning than would have been possible through numbers alone. I was surprised by the level of emotional intelligence among the CFOs, as my own professional experience has not always shown that CFOs have this characteristic. With the level of change these institutions were undergoing, consideration for the impact of those changes on members of the campus community and finding ways to help the members of the community understand and support those changes is very important. Indeed, it was my observation that the conflict and tension displayed by CFO1 was likely related to inadequacies in this area as revealed by their comments.

Although admittedly a tentative observation from a small sample of four institutions, it was nevertheless quite interesting that the institutions with CAOs and CFOs who both reported positive, collegial, functional relationships were the institutions that seemed to be moving forward most effectively to confront their tensions and challenges with high-impact, strategic solutions. These were Institution-2 and Institution-4. It should also be noted that these were not close, personal relationships. As CFO4 described it:

It’s not like we have lunch every day. It’s not that kind of relationship. But you know, as I’m getting to know [them] and [they’re] getting to know me, you start to pick up the vibes as to when you need to pick up the phone and talk to [the CAO]. Or, vice versa, the [CAO] is hearing something from among the faculty, or has a bit of information that [they] think would be helpful to know.
CAO and CFO comparisons. Finally, a very important interpretation developed from the interviews with the CAOs and CFOs involved a difference in their general approaches to planning and decision-making. Taken as a whole, the CFOs in the study seemed to be more process-oriented in their approaches. That is, they indicated that it was their job to provide the general guidelines for decision-making by a budgetary committee, and then shepherd the decision-making through to a recommended budget that included resource allocation. The process was very important to them, and although they clearly felt responsibility for the finances of the institution, they simultaneously respected the participatory process for developing budget recommendations, as well as the corresponding decisions made by the participants and the way these ultimately contributed to a collaborative outcome. CFO1 described this in their personal approach as, “I don't pretend to have priorities,” and by stating that their responsibility was “making sure that decisions get made.”

CAOs were different in their approach as revealed by the interviews with the participants. While CFOs were more process-oriented, CAOs displayed a greater tendency to be outcomes-oriented. That is, CAOs described the evaluation of options and development of decisions that involved gathering as much information as possible with which to formulate what they believed to be the best decisions possible. They also reported having conversations with key constituents to discuss the issues and options for solving institutional problems. However, CAOs then in a very pragmatic way navigated the most effective, highest probability approach to implementing resulting decisions. In this regard, CAOs seemed to personally ‘own’ the decisions more so than the CFOs. Essentially, this can be described as differentiated from the approach of CFOs in being
more personally involved in finding solutions rather than trusting others to do so. CAO3 was an outlier in this regard, as being more deferential to faculty than the other CAOs, as discussed in the sections above. However, this pattern held true in CAO1, CAO2, and CAO4.

The foundations for this interpretation can be found in the words of the participants themselves, as well as the way in which they described navigating the various constituencies as they sought to move their respective institutions forward. For example, CAO4 conveyed the following key phrases in this regard: “I really want to know what the right answer is.” “There is an art and a science to it.” “The data will take you so far, and then the rest you have to do on your own.” “There’s what we call knowledge, and there’s something called wisdom. I understand what wisdom is, now. I didn’t understand it when I was 20. But I understand it now, you know.” “Rely a lot on personal relationships and convincing people, building a case.” “Build a very convincing case.” “Transparency is a really big part of it.” “I need them to understand how severe the crisis is.” “Have good, hard conversations with them.” “You’ve got to sit down and drink a lot of tea and jawbone people, because I can’t threaten people.”

CAO1 used terms that were equally compelling in this regard: “With evidence, the case makes itself.” “Facilitator.” “Establishing realistic goals.” “Transparency of process is crucial.” “Make sure people have access to data to conduct their own evaluation.” “Being heard and having a voice is important. So I think that my role is to helping ensure that they do have a voice.” “I don’t know that I can ensure consensus, I don’t know that it’s my job to do that. I don’t know that that’s a possibility.”
CAO2 similarly followed this interpretation well: “The majority of my time is spent building relationships and getting the information I need.” “Taking that data and putting it in front of people, and saying ok, look, this is our data, these are our students. I haven’t been here, you have, how do you explain this? What do we do about this?” “In addition to rote expectations of CAO, I’m really here to push.” “It’s about relationships and allies.” “Feel them out. Have that conversation.” “If you don’t have the votes, don’t do it.” “Don’t waste opportunities.” “Don’t let things die on the vine for lack of support or buy-in.”

In summary, I interpret the approaches of CAO1, CAO2, and CAO4 to reflect that of skillful politicians and leaders. Based on the information obtained in the participant interviews, these individuals displayed the desire and ability to actively gather information, formulate well-considered decisions, build cases to support those decisions, navigate constituencies to build support for implementing those decisions, accept responsibility for the decisions, and be willing to change course if necessary. I would not propose to argue that this approach would be effective in every institution and in every set of circumstances. But the private liberal arts colleges in this study would not be considered typical of the mainstream of colleges and universities today. These private liberal arts colleges were in trouble and confronting very difficult tensions and challenges. The approach used by these three CAOs could reasonably be called situationally-specific in nature. But indications were that the approach was proving effective in helping their institutions survive, even if only in the short to mid-term.

**Research question 5.** What types of data and/or information are available to these decision-makers in the areas being investigated, and what bearing does it have on
their decisions? In the category of Information in Decision-Making, four aspects of data and information used to support decision-making were developed as themes from the participant interviews: Systems-Based Data, Institutional Research Offices, Participant Information Gathering and Use, and The Role of Structured and Unstructured Information. These are discussed below.

**Systems-based data.** The unavailability of structured/quantitative information was reported as a problem at all four institutions participating in the study. Multiple factors played into this, but perhaps chief among them as reported by the participants were problems with the enterprise resource planning (ERP) systems used by the schools. The problems ascribed to these ERP systems included the age of the systems, insufficient maintenance of the systems over time, user modification of the systems’ databases to incorporate non-designed data fields as a way of supporting evolving needs over time, functional limitations of the systems, difficulty in extracting data for reporting, and corruption of the databases leading to data integrity issues.

It became clear from the information provided that problems with structured data and analytics had also proved to be another area of unpreparedness for the current financial situation faced by the schools.

As most of the participants in the study were relatively recent to their positions, the question of whether data from the ERP system(s) had been ever been used to support operational management and decision-making at the schools was not pursued. However, several participants spoke to the way in which over recent years data had been sought from these systems as a response to the growing challenges, but that the problems with the systems already noted essentially precluded access to the data without substantial
time, money, and effort. One outcome of this situation as reported by the CFOs in the study was the development and reliance on spreadsheets from multiple questionable sources to substitute for more authoritative, system-generated data. One of the CAOs reported that they had become so suspicious about the validity of the information previously produced at the school that they had serious concerns that the institution had reported bad data for compliance purposes, including IPEDS.

CFO4 described the ERP system used at their school as “lousy” and also spoke to the serious data integrity issues the school was working to overcome. CFO2 stated that the ERP at their institution was an old system and part of a weak infrastructure. The participant related that this significantly compromised their ability to develop reliable data to support decision-making. “And there’s a real weakness in the financial reporting that we’re trying to correct, so… let's hope we’re right.” CAO2 reported that “even our student information system has been pretty compromised just because you know, they've done a lot of work-around’s, and they don't use the right fields and the right coding.” Notably, the systems used by all four institutions in the study were produced by the same company.

**Institutional Research offices.** One of the most significant changes at the institutions over recent years had been the strengthening of the Institutional Research functions at the schools. Institution-1, Institution-2, and Institution-4 had all looked to strengthen this capability as they sought data to enable evidence-based decision-making. Notably, these were the three institutions with relatively new presidents as reported earlier. In addition, the CAOs and CFOs at these institutions were all heavily dependent on information as described in preceding sections of this report. Only at Institution-3 had
Institutional Research changed little. Interestingly, CAO3 stated in their interview that “I am currently assessing the information needed to support decision-making.” CAO4 reported that when they had become the CAO, a period of less than five years ago, “we literally had no IR office.”

At all three institutions with relatively new presidents, the institutional research offices had been targeted for improvement. The directors of institutional research (DIRs) at all three institutions were relatively new in their positions, and all were well-regarded professionals as reported by the CAOs and CFOs from these institutions. It was clearly noted that these individuals were exceedingly busy as a result of the demands now being placed on them for data and information. It also became clear that the DIRs and their very limited staff served multiple areas of the institutions, and were not limited to academics as is often the case. The DIRs were described even by the CFOs as providing data that played heavily into institutional decision-making, including budget and financial decisions.

It was consistently reported by the CAOs and CFOs that the DIRs generally produced structured / quantitative information. This was largely confirmed during the interviews with the DIRs themselves. However, the DIRs at each of the three institutions stated that they also were involved in qualitative information production such as campus surveys. The three DIRs all spoke of the value in both structured / quantitative and unstructured / qualitative information. Simultaneously, they related that their limited bandwidth in the face of increased demands for data essentially forced them to focus primarily on quantitative information. The DIRs at Institution-1 and Institution-4 in particular both expressed their desire to be of more strategic importance to their
respective institutions if they had more time and resources available to do so. Notably, the DIRs at all four institutions stated that they believed they played an important part in institutional decision-making as a result of the information they provided.

The other factor of note concerning the Institutional Research functions at all four schools was that their focus was almost entirely on information internal to the institutions. When asked if they gathered or produced information external to the institutions such as competitor analyses, environmental scans, or benchmarking, all four DIRs reported that this was not a significant component of their jobs. They noted that their respective institutions generally used external consultants in situations where this information was sought. This was confirmed by the CAOs and CFOs at the institutions. DIR1 and DIR4 related during their interviews that they had recently started doing somewhat more external work.

When asked their perceptions of the current Institutional Research offices at their institutions, the CAOs and CFOs at Institution-1, Institution-2, and Institution-4 were quite complimentary. CAO4 regarded the function at their institution as new and excellent. CFO4 described it as new and much stronger. CFO2 described the DIR at their institution as very bright and expressed a strong desire to have more access to them. CAO2 described the DIR as great. “[They’re] like the data hound. [They] love you to throw a bone to [them], like OK, tell me this.” CAO1 stated that the role of Institutional Research at their institution had changed significantly over recent years, and that their relationship with the function was very strong. “There isn’t a decision that I make on the academic side that I make without attempting to gather, or to bounce off of [DIR].”
CAO1 also noted that the DIR had recently begun to do more external “comparative work for our peers and our aspirants in a way that we haven’t before.”

**Information gathering and use by participants.** All eight participants in this study stated their high regard for data to support their own planning, management, and decision-making. However, the depth of the unstructured and follow-up questions in the interviews revealed that in at least two cases, this assertion by the participants was more nominal than genuine. CFO1 and CAO3 both spoke of the importance of developing and using data in decision-making. However, neither provided any substantive examples of this, even under request to provide such examples. The information used to support management and decision-making by CFO1 was superficial and non-specific in nature.

As well, CAO1 directly contradicted CFO1 in this regard, strongly describing their suspicion that such information assets did not exist. In this situation, decisions concerning resource allocation seemed to still be tied to the CFO personally, to be nearly formulaic with regard to a budget advisory committee, and to have resulted in negative feelings by members of the faculty as well as other senior leaders as reported by CAO1. As a practical checkpoint between the information provided by CAO1 and CFO1, CAO1 generally spoke in much more detailed and substantive terms even concerning financial and budget issues at Institution-1 than did CFO1. The professed use of information by CFO1 was not substantiated during the interview.

In a similar way, CFO3 alleged that the use of information was important to them in their role. However, when asked for examples they said, “I do some walking around, but mostly meetings with the president and with students. I do a lot of listening.” They also noted that the ERP system at the school was “a real nightmare.” However, they did
not know the name of the system and provided a significantly incorrect answer in this regard. The individual did mention “surveys, benchmarking, new career opportunities,” and they did say that “I use outside for numbers, including consultants.” But in another telling statement, CAO3 stated that Insitution-3 did not have an Institutional Research office, which was subsequently determined to be factually untrue.

For the other participants in the study, CAO1, CAO2, CFO2, CFO3, CAO4, and CFO4, it was generally clear that these individuals all valued information and described how they actively sought to acquire information to guide their thinking, planning, management, and decision-making. During their respective interviews, all conveyed specific and substantive examples of this.

CAO4 could be considered among the most committed in this regard. When the participant was asked what tools and resources they used to support their decision-making process, they answered, “Data. Data. Lots of data.” However, a fundamentally important point must be made here, regarding the use of the term “data” by the participants, and particularly the CAOs. This point concerns the fact that there was very little distinction between data, information, knowledge, or intelligence made by any of the participants. This had been expected with regard to the specific meanings and uses of the terms knowledge and intelligence, as this distinction would generally be more specialized and discipline-specific than would be reasonably expected from these individuals. However, the critical point to be made here is that the word data was typically used in a generic reference to any and all information used by the participants. All data and information was collectively called “data” in most cases. This point was explored intentionally in all the interviews, and the issue is discussed more fully in the
section that follows. However, I will note that CAO2 summarized this generic use of the term “data” very effectively: “For me, it’s all data.”

CAO1 discussed in rich terms and using examples how they were relying heavily on information to guide their understanding of situations, as well as to formulate decisions. As noted in the sections above, this individual had very thoughtful reasons for doing so, including reducing the subjectivity and bias in their own mind. This participant also described the way in which, working with the DIR at the school, they were emphasizing “more survey work, more focus groups, lots of more informal conversation” as a way of gathering information. As CAO1 noted, “Any tool or information I can use to take the subjectivity / bias out of the process” was sought and utilized. The participant emphasized their reliance on the Institutional Research office, not only for information but also to discuss key issues interactively. This CAO noted “a lot of open-ended work” they were doing, particularly to gather information on the feeling and perceptions of the campus community on key issues and topics. And in a way reflecting a higher-level and more strategic approach that was detected throughout the interview with this individual, they described in some detail intentionally going after information concerning how colleagues both at other institutions as well as organizations outside higher education approached problems and challenges.

It was clear in the interview with CAO2 that they used data and information extensively, both to understand issues and formulate decisions, and also to build compelling cases for key changes and initiatives. As this participant stated, “I don’t see how you could do higher ed without data.” But this individual quickly noted that they also incorporated “intelligence gathered from people in both formal and informal ways”
in their role. And importantly, CAO2 described the important way in which they consistently ensured “information is cross-referenced for validation.”

CAO4 described in clear and compelling ways throughout their interview the efforts made to gather useful information of multiple types and from numerous and varied sources. “I try to use everything I can. And try to triangulate.” “I just cast the net as broadly as I can.” The participant noted, “I read a lot,” and stated that they had begun reading a large number of leadership and business management books. They specifically mentioned Good to Great, Great by Choice, and Blue Ocean Strategy. Like CAO1, this participant also described the way in which “I talk to my colleagues here, I talk to my colleagues outside the institution.” “Anything I can get my hands on that you know, that will inform me.”

In a way that conveyed how uncomfortable it could be not having information to guide their decision-making, CFO2 said with emphasis, “For me, accurate data is critical. And right now we’re flying [blind].”

**The role of structured and unstructured information.** Another interesting development from this research that relates to decision-making is the way in which both structured and unstructured information were used by the participants. This relates to the issue raised in the section above concerning the use of the term “data.” Again, the participants, particularly the ones at the institutions with new presidents, as well as CFO3, all discussed in detail the way in which they used both forms of information in their decision-making. I had expected from the literature review as well as personal experience that information would play a very important role in decision-making. However, all participants clearly understood the differentiation between structured / more
quantitative information and unstructured / more qualitative information. And perhaps most notably, even the CFOs in the study spoke to the value they placed in unstructured / qualitative information.

CAO1 related that they “have traditionally relied less on the structured data and more on the informal data because I had more faith in it. When I have structured data that I’m confident in, it weighs equally with the unstructured data.” CAO1 added, “I don’t want to overvalue statistical analyses and quantitative data.” Like several others in the study, this participant described ways in which they actively sought information from a variety of sources that they used to understand issues, weigh options, and formulate decisions. As noted above, CAO1 referenced “a lot of open-ended work” they were doing, particularly to gather information on the feelings and perceptions of the campus community on key issues and topics. The participant spoke throughout the interview of the way in which they attended as “many meetings as possible” to gather information. “So in terms of the qualitative piece, most of that is being gleaned from either formal surveys, or you know, informal discussions that are being had amongst and between members of the faculty and myself.” When I asked if the participant considered this intelligence gathering, CAO1 answered, “Yes. Absolutely. And for me, there is no other way to make a decision.”

CAO2’s use of data was detailed in the preceding sections. Again, very importantly CAO2 stated concerning data and information, “For me it’s all data.” “The information I need does not just come from what I see in the fact book, not just from reports that get generated.” In a way that invoked clear imagery, CAO2 related one of the most important aspects of Institution-2 for them and why they had wanted to be at
such an institution. In context, this point was also intended to illustrate the value of unstructured information, particularly in face of structured data that was very suspect. In their words:

I mean part of me and why I wanted to come to a school this small was because I knew we could count every student. We could put our hands on every student. And I preach that all the time. You have an incoming class of [number] students. We literally can know where every one of those kids is at any moment.

They subsequently related how important this was concerning ensuring the retention of the students.

CAO3, when asked about the relative weight of both structured and unstructured information, replied, “I weight both unstructured and structured the same.” However, less significance was assigned to this response given the issues with CAO3’s use of data and information previously discussed.

CAO4 seemed one of the most thoughtful participants in this study. When we explored this area of the interview questions, the participant said, “The data will take you so far, and then the rest you have to do on your own. And there the qualitative stuff becomes really, really important.” In a somewhat modest way, CAO4 stated, “I’m not a numbers person really.” But much of the interview contradicted this statement, as the participant described using a number of examples of how they utilized structured / quantitative information, and how they worked very closely with a highly-competent DIR. The degree to which CAO4 actively sought various types of information from numerous sources both within and external to the institution was discussed above.
CAO4 appeared to have clearly reflected on the relative merits of different information as revealed throughout the interview. “I have seen enough data to know that you can’t always count on it.” “So sometimes I have almost a third sense, like this data is bullshit.” They subsequently related an incident in which the respected DIR had brought them information that, upon reflection, they had believed to be in error. As the CAO recounted:

Like the other day, [DIR] was getting me some data, and I said ‘[DIR] this is crap, I can tell it’s crap. Cause it’s not true.’ And [they] went back and [they] said ‘you know, you’re right.’ It wasn’t right.

As the participant noted, “I bring that depth of knowledge about individuals, about history.” “I try to balance in my mind what makes sense.” “I really want to know what the right answer is.” So it was not surprising when CAO4 was asked if they weighted structured or unstructured information differently. “Not with consistency.” They had previously stated, “I cast the net as broadly as I can.”

CAO4 also pointed out an important theme that was detected among a number of the participants in the study. This involved the link between the confidence assigned to information, and the confidence they placed in the source of the information. As this participant described it, “If I’ve got somebody who I know always give me good data, I tend to rely on it heavily.” Similar references to confidence regarding the sources of information were made by other participants, both CAOs and CFOs.

Taken as a whole, the CFOs not surprisingly spoke to the importance of structured / quantitative data and information. However, in a way that was surprising, they also spoke of the importance of unstructured / qualitative information as well. For example,
CFO1 stated that “quantitative is key, but qualitative informs the answers,” and “understanding what the data means requires qualitative.”

CFO2 related that, “If I have quantitative analysis available, that’s what I’m going to rely on. Less on qualitative.” But they subsequently commented that qualitative information “helps me sometimes get perspective.” This participant recounted that they did “a lot of walking around and talking.” When I asked if they considered this gathering unstructured intelligence, they reflected momentarily and then answered, “Right. Right.” When asked if there were other tools or resources they used to support their decision-making, CFO2 responded, “No, it’s experience. I rely on what I’ve done, what I’ve seen, and what I know about the different things.” “So a lot of it is experience, and data, I mean but basically, what else would you be doing that on?”

CFO3 stated, “I think that from my perspective first and foremost I’m looking for hard data. Can’t always find hard data. So for me, is that a good companion for hard data is qualitative research.” The participant explained in detail a sophisticated structured analysis the institution had undertaken that they had overseen involving student attrition patterns. The analysis utilized data from within the institution as well as data from external organizations. It had proven both effective and useful to the institution.

CFO3 was also well versed in qualitative research through both previous professional and personal experience. They described situations at Institution-3 in which qualitative research was specifically indicated to support decision-making. One involved the restructuring of consolidated student services at the school. As they explained:

In other words, we couldn’t peer into the minds of [all our] students, but if we got together [a number of] focus groups. I mean my theory is that if you talk to
enough people about a topic, more likely than not you’re getting a good sense as to what’s going on. Even if you can’t put a number on it.

They continued, “Because the patterns emerge. When you ask 10, 20, 30, 50 people, the patterns emerge. And the patterns emerged.” It was therefore not surprising that when CFO3 was asked if they regarded the usefulness of structured / quantitative and unstructured / qualitative information differently and replied, “I happen to be a proponent of both.”

CFO4, in similar fashion, began their responses to questions involving the use of information to support decision-making by stating, “I mean, I’m a numbers person.” However, through their next statements they conveyed a much richer description of their approach. “I think the quantitative data have got to rule the day because that’s what they are. OK. As the saying goes, the numbers don’t lie.” They then added, “I think there has to be a qualitative overlay that helps you put the numbers in context so that the…. Because otherwise I think the numbers are just raw data, and they don't really tell the whole story.” “The point is, that the numbers are only part of the story.” CFO4 also described their engagement with members of the campus community to both gather information from and convey information to participants. “We do have a more formal process. But the conversational interaction with the faculty is pretty valuable.” “I’m gathering information formally and informally through our normal processes and through our conversations and through our open dialogs.”

CFO4 described the way in which this was all valuable information in their management, planning, and decision-making: “So I look at the numbers and personally I have to discipline myself. I have to work hard at adding that contextual overlay. And so
it’s a struggle for me to do that.” I observed that this seemed to involve not only numbers, but a more holistic use of information. CFO4 replied:

I don’t want to get melodramatic, but why have people in charge of things? I mean you could have a computer spit out the numbers, and you could have another computer read the numbers and say, well, you’ve got to make this, this, this and this decision. But if you don’t have somebody with a heart and a mind…

In summary, the CAOs and CFOs who contributed substantive information in this area of the investigation related an understanding, appreciation, and use of both structured and unstructured information. The CFOs seemed to distinguish between the two types of information somewhat more than the CAOs. This could be represented appropriately by a phrase used by one of the CFOs: “qualitative overlay.” CAOs appeared to focus on the differences and distinctions between structured and unstructured information to a lesser degree. Correspondingly, this could represented appropriately by a phrase used by one of the CAOs: “For me it’s all data.”

Conclusions

Institutional tensions and conflicts. A fundamental tension was reported at each of the institutions that involved a traditional view of the mission and tradition of the institutions, juxtaposed to the steps being taken to ensure the financial survival of the institutions. At the intersection of these two conflicting priorities was the central issue of net tuition revenue. The four institutions in the study all reported to be struggling. Essentially, Institution-1 yielded conflicting information from the CAO and CFO concerning progress in strengthening its finances. Institution-3 yielded even more conflicting information. But sufficient information was gathered and cross-referenced to
show that these two institutions were not on sound financial ground. Institution-2 and Institution-4 were more clear and consistent in describing their institutions as struggling to survive as revealed by the CAOs and CFOs.

Among the specific tensions and conflicts reported at the institutions were the following:

- Student recruitment and affordability
- Consumerism and focus on return on investment (ROI)
- Student retention
- Changing student demographics
- Resistance to change
- Institutional unpreparedness.

Other non-convergent themes included diminished rigor, and race and class within the student body.

In addition to the convergent themes above as reported by the participants were other important underlying factors that were consistent across the four institutions. These were called out less directly and specifically by the participants than the tensions and conflicts above. However, they are part of an overall context and feature of the institutions, and they are of fundamental importance. One of these was institutional insularity. This relates to both lack of preparedness by the institutions, as well as to resistance to change within the institutions. A second factor was single-loop learning (Morgan, 2006; Bess & Dee, 2012) as the primary way of decision-making and institutional problem-solving at the institutions historically.
Institutional insularity characterized all four institutions, particularly in the time previous to the arrival of the relatively new presidents and senior leaders at Institution-1, Institution-2, and Institution-4. Insularity was a characteristic that participants at every institution were seeking to overcome. The various ways in which this was expressed by the participants will not be reiterated here. CAO1 described this in a clear way with the phrase, “trying to get outside of ourselves.” For liberal arts colleges, that have traditionally prided themselves as having rural settings where students would not be subject to influence from society (see Rudolph, 1990), isolation and insularity would have emphasized the power of the institution to establish the beliefs, values, and social norms of its members. CAO2 described the majority of faculty at their institution as “lifers” and noted this as both a good and bad thing. Good because they are “committed to the institution,” but bad because “this is primarily the only institution where they have worked,” “they also don't necessarily have the exposure to the reality of higher education in general,” “they believe in an institution that might not still exist,” and “they believe in the institution of yesteryear.”

In his work on organizations, Morgan (2006) invokes the allegory of Plato’s Cave from the classical work The Republic, by Plato. Morgan discusses the way in which organizations can sometimes function as psychic prisons. Because they are socially constructed realities, organizations can become mentally confining due to the images, ideas, thoughts, actions, and processes within the organization. Anthropologists have long noted the power of culture to create the meanings, values, and other social constructs that influence the realities of the members of a cultural group. My own graduate work in anthropology and archaeology led me to the suggested association between such
organizations and private liberal arts colleges. Most archaeologists would likely describe
the benefits of cave dwelling to include the following: practical yet somewhat
comfortable conditions, facilitation of close family and social groups, safety and security
under most circumstances, habitat generally available for extended use, and requiring
little maintenance and upkeep. However, all of this was subject to change rapidly in the
presence of environmental disruption. And liberal arts colleges are experiencing
enormous disruption.

Bess and Dee (20012) observe that members of human systems feel
uncomfortable dealing with problems that are not of their own intentional making,
including situations that have no precedent in known decision-making repertories. As a
result, such decisions are time-consuming, prone to human error, and anxiety-producing.
The authors note that in organizations with relatively stable external environments, many
decisions involve routinization and that many decisions are programmed. This involves
less thought and reflection about the decisions. Bess and Dee note that this can be
harmful to the organization, and result in the organization not being responsive to the
external environment. As they report, when problems are “conflict ridden,” they may
remain submerged and neglected, and as a result never reach the decision-stage. The
authors describe this as decision avoidance.

Following the metaphor of psychic prison, Morgan (2006) relates what happens
when a member of the group leaves the cave, and then returns bringing revelations about
the outside world:

For the prisoners, the familiar images of the cave would be much more
meaningful than a world they had never seen. Moreover, as the person espousing
the new knowledge would now no longer be able to function with conviction in rela-
tion to the shadows, his fellow inmates would likely view the world outside as a
dangerous place, something to be avoided. The experience would actually lead
them to tighten their grip on their familiar way of seeing. (p. 208)

Morgan subsequently notes that the structures, rules, behaviors, beliefs, and patterns of culture that define organizations are “personal in the most profound sense.” Any attempt to change these can mobilize strong opposition as individuals and groups “defend the status quo in attempt to defend their very selves” (p. 236).

Single-loop learning and by extension decision-making was a second factor detected in these institutions. Indeed, Institution-1 and Institution-3 were clearly struggling with moving away from single-loop decisions as illustrated by the interviews with participants. Single-loop learning is characterized by a direct action-response mechanism and is used commonly in budget and management controls as a way of ensuring that organizational activities remain within established limits. Essentially, this approach is designed to identify deviance that will then trigger actions to return the parameter in question to the it required levels. Monthly budget reports are typically cited as an example of a single-loop processes.

As noted by Bess and Dee (2012), single-loop learning is relatively simplistic and uses a limited set of feedback mechanisms. But most critically, as stated by the authors, “Single loop learning attempts to correct mistakes but does not explore why the mistakes occurred in the first place. (p. 675)” As a result, when the ability to respond tactically to problems such as dropping enrollment and institutional budget deficits was exhausted, the
institutions were ill-prepared to seek more strategic, structural changes. CFO1 described budget management at that institution in ways strongly suggesting single-loop learning. And CAO3 as well as CFO3 both in their own ways indicated with was a prevalent approach at their institution.

Organizations that have been characterized by routine operations, programmed decision-making, and relatively stable environments are not well positioned to respond to large and fundamental changes. Information provided by the participants pointed to this type of situation that had existed at the institutions previously. As noted in the interview summaries, participants spoke of insularity, inadequate sources of information, lack of maturing in decision-making processes, and related factors. This is important in two ways. First, in the face of substantial environmental changes, whatever plans a higher education institution may have had previously would very likely prove ineffectual in helping the institution confront their emerging challenges. Second, institutions that have traditionally been very routinized and employed programmed decisions are likely to have inadequate planning capabilities with the capacity to analyze profound changes and formulate adequate responses. And as will be discussed below, the institutions will face significant obstacles in developing or acquiring those capabilities. As documented by the Eisenhower Presidential Library, Former President Dwight Eisenhower followed an important principle while serving as Supreme Allied Commander in World War II: “Plans are useless, but planning is everything.”

Bergquist and Pawlak (2007) report that the collegial culture, an important if not dominant feature at liberal arts colleges, is not beneficial or effectual in this regard:
For all its strengths – specifically, its encouragement of deliberation and open communication – the collegial culture suffers from a lack of organization and coherence. These deficiencies are particularly important in a postsecondary institution facing limited financial resources and a changing student constituency.

(p. 73)

I should note that when CAO4 stated during their interview that, “I would say that my sense of it is that there is, that we are in the middle of a perfect storm here,” my initial take was this may have been dramatic to the point of hyperbole. The benefit of time and reflection has left me with a much greater appreciation for that statement.

**Personal leadership and change management.** Ways of negotiating the tensions and conflicts reported by individual members generally fell into two categories as reported by the CAOs and CFOs. CAO1, CAO2, CFO2, CFO3, CAO4, and CFO4 were active, informed, and passionate leaders who were actively engaged in leading change in their institutions. CFO1 was more removed from the institution generally, and displayed a more spectator-like approach rather an engaged approach. CAO3 was also an outlier in this area. This participant was far more deferential to faculty and the status quo at the institution, and presented as concerned for their own professional survival as much as they were for that of the institution.

In Chapter 4, I described the way in which CAO1, CAO2, and CAO4 in particular appeared to be skillful politicians and leaders. Based on the information obtained in the participant interviews, these individuals displayed the desire and ability to actively gather information, formulate well-considered decisions, build cases to support those decisions, navigate constituencies to build support for implementing those decisions, accept
responsibility for the decisions, and be willing to change course if necessary. The term politician might not be well received by all readers. As Morgan (2006) states that, “Politics, in short, is seen as a dirty word” (p. 150). However, the author also relates that politics can be of enormous importance to an organization:

This is unfortunately because it often prevents us from recognizing that politics and politicking may be an essential aspect of organizational life and not necessarily an optional and dysfunctional extra. In this regard, it is useful to remember that in its original meaning the idea of politics stems from the view that, where interests are divergent, society should provide a means of allowing individuals to reconcile their differences through consultation and negotiation.

(Morgan, p. 150)

Though their leadership styles varied to a degree, the two common characteristics these CAOs shared were: planning and implementing strategies to accomplish important changes aimed at improving the institution in ways that would help ensure its financial health and survival, and building strong and compelling cases for convincing faculty of the necessity and urgency of those changes.

Another area where time to reflect proved very beneficial concerned the way in which I had first interpreted the efforts of these six participants in engaging constituents collaboratively as attempting to build buy-in. This interpretation ultimately proved insufficient. Bess and Dee (2012) stated:

Collaborative leadership is not about getting people to buy in to a goal established by top-level, formal leaders; instead it is about engaging in an open process of
collective discovery where people can create a shared vision and identify commitments to guide their work together. (p. 870).

These authors note research has demonstrated that collaborative leadership can contribute to significant organizational improvements. It became clear upon reflection that one of the changes being sought by the three CAOs and three CFOs noted above, was attempting to move the organization beyond its insular nature and to make it more aware of and responsive to its environment.

Viewed from a higher perspective at the organizational level, the actions by these leaders, whether conducted with full awareness and intentionality, could be seen as moving their respective organizations toward becoming learning organizations (Senge, 1990). Bess and Dee (2012) observe that the absorption and construction of new ideas is precisely what higher institutions do. However, they simultaneously note that for colleges and universities, this occurs at the individual level and not at the organizational level. The authors state that learning organizations are able to shift both culturally and structurally to accommodate new ways of thinking and organizing. Functioning as a learning organization also enables an institution to be more aware of and responsive to its environment. By extension, learning organizations help overcome the challenge of single-loop learning and corresponding decision-making and problem solving. However, acquiring individuals who function at a higher level of learning and decision-making does not transform the institution into a learning organization. This transformation is far more difficult and requires much more time and corresponding changes as well. In the meantime, the institutions had to survive in order to evolve.
Another change perceived in Institution-1, Institution-2, and Institution-4 as revealed by information gained from the participants involved a shift away from the collegial and managerial cultures that seemed to have been dominant at the institutions previously, and toward a growing presence on campus of the developmental culture. Whether this was an intentional de-emphasis of faculty authority, and position-based authoritative management, was unclear. In fact, that is unlikely. The shift is more likely linked to engaging constituencies, building alliances, and educating colleagues on the issues and challenges facing the institution. This approach was widely reported by the three CAOs and CFOs in the group identified above, and was particularly important to CAO1, CAO2, and CAO4. As stated, Bergquist and Pawlak (2007) have noted the lack of effectiveness of the collegial culture in helping the institution respond to environmental challenges including limited financial resources and a changing student constituency. Bergquist and Pawlak (2007) similarly note that faculty members and administrators within the managerial culture frequently seek clarification of goals and objectives when involved in such endeavors as strategic planning and program evaluation. “By contrast, the developmentalist frequently asks: What are we really doing in this college and university, and is it what we should be doing” (p. 106)?

The CFOs in the study generally were more process-oriented in their approaches. All of the institutions had some form of advisory committee to help develop recommended budget and financial decisions. As a group, the CFOs spoke to their responsibilities in ensuring that their respective processes were followed, that the participants completed their work, and that corresponding recommendations were
developed and put forward to senior leadership of the institutions for consideration. All
the CFOs fit this pattern relatively well.

**Institutional responses.** Institutions were found to have employed a number of
responses to the challenges confronting them. Further, there was general convergence
around most of the following. The institutional responses included:

- Changes in senior institutional leadership
- Improving student retention
- Reaffirmation of a liberal arts focus
- Evidence-based decision-making
- More formalized institutional processes for decision-making
- Academic program diversification
- Academic restructuring
- Cost cutting and operational efficiencies
- Maximizing student recruitment.

Reaffirmation of the liberal arts focus of the institutions was expressed by all
institutions. This likely served several purposes. First, the mission and tradition of the
institutions was a basic element of the culture and identity of the schools. In this respect,
the reaffirmation was very genuine. At the same time, the identities and brand images of
these schools were tied directly to the missions they had espoused for generations. And
finally, although there were no indications that consideration had gone into any
fundamental change to the nature of the institutions, it would seem highly unlikely that
this would be been accepted by the faculties of the institutions. Comments concerning
alumni and boards of trustees did not seems to have indicated an overwhelming concern
in this regard. But all the CAOs in particular spoke to the way in which the liberal arts focus provided meaning and purpose to faculty. It was the culture in which the faculty existed, and as discussed earlier Morgan (2006) and others have noted the resistance and conflict that arises among members of an organization when attempting to change the basic elements of a culture. As CAO4 related concerning faculty:

And it’s an odd constituency. They’re not your standard employee. You know, you’ve given them something called tenure. They can tell you to go screw yourself if they don’t like what you’re asking them to do. You’ve got to sit down and drink a lot of tea and jawbone people because I can’t threaten people. I can’t fire people… if they’re untenured faculty I can, but if they’re not I can’t. I have nothing over them, you know.

At the most basic level, the other responses could be seen as falling into three general categories: reducing expenses, growing tuition revenue, and developing stronger planning and management capabilities to help the institution develop strategic responses to environmental change. Academic program diversification was meant to find other ways of producing tuition revenue by creating programs that were more market-oriented, and was also indicated as a way of financially supporting the ability to continue to offer a liberal arts education. Academic restructuring had several stated benefits, including streamlining the core curriculum, finding better ways to support student success and retention, and reducing the resources required to deliver courses and programs, among others. It must be noted that all of these changes were portrayed in such a way as to indicate no conflict with the liberal arts identity of the schools. As CAO1 stated, “So,
adherence to mission, the mission of the institution has changed, but liberal arts at its core, always. Despite a number of growing professional programs.”

Changes in senior leadership were an important factor at three of the institutions, Institution-1, Institution-2, and Institution-4. It became apparent that these changes were not the result of normal attrition. These three institutions all had relatively new presidents, and the presidents were reported to have immediately launched new initiatives and changes. While the impact of presidents regarding change at colleges and universities has been debated in the higher education literature, it was clear that these presidents intended to be agents for change and to have an impact, and that they had conveyed to CAOs and CFOs that they fully intended to do so. Give the daunting financial challenges faced by these institutions, this is not altogether surprising. As Bess and Dee (2012) state, “College and university presidents have as a primary role securing a firm financial future for their institutions” (p. 23).

The presidents had also moved forward to make substantive changes in their cabinets. The participants from the three schools noted above spoke to these changes, with one noting that the president had already replaced their entire cabinet. Direct reports had been sought who were capable, dedicated, and prepared to enact the changes necessary to enable the institution to survive. Not surprisingly, the CAOs and CFOs from these three institutions indicated that they were not only prepared, but moving forward to do precisely that.

The move to evidence-based decision-making and more formalized institutional processes for decision-making can be understood from several perspectives. These include the issues of institutional unpreparedness and resistance to change noted under
Research Question 1. However, these can also be accounted for by the shift away from
the dominant managerial and collegial cultures of the institution, toward a more
developmental culture that was emerging. The CAOs in this study displayed no reticence
in their indictments of CFOs generally who were seen as having personal power over
budgets and who were perceived to have acted unilaterally and in an uninformed way.
Indeed, this was described as a current or previous problem at all four institutions.
Previous decision-making capabilities and processes at the institutions were noted as
having been historically week and largely ineffective. And in several cases, the current
financial situations at the schools were said to reflect the result of that. It should be
noted, however, that in the case of Institution-3 a strong case was made by the CFO for
the lack of effective decision-making and positive change on the academic side of the
institution.

The move to evidence-based decision-making and more formalized institutional
processes for decision-making can also be seen as having yet another benefit for the
schools. Participants across the four institutions spoke of countering single-loop learning
and associated decision-making and problem-solving techniques that had characterized
the institutions previously. The participants spoke clearly of the way these mechanisms
had proven ineffectual in helping the institution identify and respond to environmental
changes. Through the efforts of both CAOs and CFOs, institutions were being pushed to
developed more robust and effective techniques and mechanisms. As noted, single-loop
learning is helpful in dealing with changes within a defined, stable, closed system. It is
not effective in identifying or dealing with the reasons for the changes. This could be
likened to treating symptoms such as a high fever, without trying to determine and treat the underlying illness.

As revenues declined and student enrollments dropped, institutions were ill-prepared to respond effectively. Argyris and Schön (1978) addressed the shortcomings of the single-loop approach by advancing what was called a double-loop model. Bess and Dee (2012) state that the value of a double-loop model is that it is designed not only to monitor and correct changes in key areas, but that it directs the organization to determine the reasons for those changes, and “if necessary, change the policies, goals, and plans that support those behaviors” (p. 676). Rather than transactional in nature, the double-loop model is intended to be transformational in that it helps the organization determine if it is performing the wrong tasks or pursuing the wrong goals. Bess and Dee state specifically that double-loop learning is more likely to result in organizations characterized by more open communication, a culture of inquiry, and greater participation by faculty and staff in decision-making and change.

It is doubtful that any of the institutions or members of their administrations or faculty were cognizant of the distinction between single-loop and double-loop learning. However, both Morgan (2006) and Bess and Dee (2012) link double-loop learning to the formation of learning organizations. And this, as well as the way in which learning organizations and the developmental culture have much in common, is directly relevant to the results of this study. In moving from personality-based decision-making as described by the participants, to more participatory decision-making involving both committees and engagement with constituencies, the institutions had moved toward becoming learning organizations.
The way in which these techniques were utilized was related by the CAOs at Institution-1, Institution-2, and Institution-4, as well as the CFOs at Institution-2, Institution-3, and Institution-4. As CAO2 described their reluctance to have decisions linked to personal relationships, Bess and Dee (2012) note that organizations and their environments are too complex and too dynamic to depend on the limited knowledge of one individual. Senge (1990) spoke to the way in which bringing people together from across the organization can facilitate systems thinking, as well encourage participants to deal with issues beyond their own units. Clearly, whether by intention or merely organically, at least three of the institutions in this study were moving in this direction. As CAO4 related, “You know, you’ve got to drink a lot of tea.”

Constituents and change. As noted in Chapter 4, faculty were the most discussed constituency in this study by the participants. All CAOs in the study, and all CFOs except CFO1 had made efforts to engage with faculty. As a group, the CAOs were far more likely to incorporate faculty into their decision-making. This is not surprising since they were more proximal to faculty in several ways. However, the CAOs were much more circumspect with regard to shared governance than expected. For while they were generally quite committed to engaging faculty in decision-making, a clear distinction was made with regard to a connection with formal shared governance. The general pattern that emerged was much more one of engaging faculty through relationships and discussions with individual faculty members and small groups, rather than dealing with faculty as an organized body.

Shared governance proved a very interesting topic among the majority of participants in the study, including all CAOs and two of the CFOs. One of the most
interesting elements to surface from the interviews was a general theme concerning how to define shared governance and what role it should play in institutional decision-making. CAO-1, CAO-2, and CAO-4, along with CFO3 as well, all expressed their view that the nature of shared governance and what role it should play in decision-making were topics higher education as a whole was struggling to come to terms with. To be clear, this in no way diminished the importance these participants placed on working and collaborating closely with faculty. At the same time, it was also made clear that the institutions would move forward in any case. As CAO2 stated, it was very important “to give faculty a voice, and yet help them recognize that consensus may not be the end game.”

Some readers may view the positions of these CAOs critically, and that somehow they have abdicated a fundamental responsibility to faculty by not strongly advocating for shared governance. I believe that would be a mistake. Perhaps the single element of the results that I have reflected on the most involves the leadership and change management styles of CAO1, CAO2, and CAO4. I would assert that there are several very good reasons for conducting themselves as they have. Several have been addressed previously.

The insularity of the institutions, and particularly faculty members who have in many cases spent decades at the institutions, does not lend itself to adequate understanding or sense of urgency concerning the challenges the institutions face. As well, the way in which the members of the institutions view themselves and their respective organizations creates a cultural reality that would be enormously difficult to change. Indeed, as described previously, attempts to change the organization, its identify, or values would likely result in much greater resistance than already exists. Simultaneously, if the institutions do not survive, by definition they cannot continue to
offer the liberal arts educational offerings that lie at their core. The words of an outsider would serve no good purpose for the inhabitants of Plato’s Cave.

In this regard, I would assert that the three CAOs referenced are approaching the issue by joining with members of the organization, as described in detail by the participants. They are engaging with faculty as individuals and in small groups. They are “drinking a lot of tea” together. As CAO2 described it, “It’s about relationships and allies.” “Feel them out. Have that conversation.” Another way to look at this function is provided by Bess and Dee (2012) in the concept of boundary spanners. The authors explain that organizations may come to depend on the knowledge and skill of boundary spanners, and their ability to “assess environmental trends and interpret and explain the implications of those trends for the organization” (p. 722). They note that when operating in complex environments, these boundary spanners must possess a wide range of skills and expertise. As the authors state, “The boundary spanners help the organization monitor the environment, and provide the information necessary to make sense of a complex external world” (p. 722). By acting as members of the organization who are engaging with faculty, exchanging essential information, and gradually building trust, the three CAOs in this study are acting as boundary spanners for the previously insular institutions. In effect, they are finding ways to influence the inhabitants of Plato’s Cave.

As important as this may be, Bess and Dee (2012) make the critical point that “Interpretation and impression making, however, flow in both directions across the organizational boundary. Boundary spanners also help shape how external constituents view the organization” (p. 722). As noted in Chapter 4, all four CAOs in this study
reported their substantial involvement in student recruitment, and in finding ways to “sell” the benefits of a liberal arts education to prospective parents and students. As all four institutions are heavily tuition-dependent, the ability to formulate and deliver messages that helped improve student enrollment was critical to the survival of these institutions. In addition, three of the CAOs reported working closely with the heads of enrollment at the schools. When CAO4 was asked if they worked interactively with the head of enrollment their answer was, “Very, very, very, very.”

Another way in which the information passed to external constituents could be important to the institutions involved U.S.News Rankings. The academic peer assessment score submitted by other presidents, provosts, deans of admissions, and high school guidance counselors constitutes 22.5% of an institution’s score according to U.S.News. In the highly competitive environment for students reported by the institutions, this issue was not insignificant. In fact my search for other information assets identified several open letters from the presidents of the four institutions in this study to their campuses in which changes in institutional rankings were cited.

Upon reflection, it seemed there might be a more useful way to view these three CAOs in particular, was in relation to the definition of developmentalist leaders as defined by Bergquist and Pawlak (2007). The authors note that developmentalist leaders are more likely to rely on expert power rather than authoritative power resulting from a position within the formal managerial hierarchy of an institution. Rather than employing charismatic and paternalistic power regarded as common elements of the collegial culture, developmentalist leaders frequently utilize collaborative and/or autonomous forms of authority. The authors relate that this is tied to the characteristics of
developmental leaders discussed by Collins (2001) in which developmental leaders are likely to be modest, diligent, and pursue specific objectives including those that are strategic and long-term.

I have referenced the way in which these three CAOs could appropriately be characterized as skilled politicians. Morgan (2006) describes the way in which leaders can control decision-making by influencing the issues and objectives to be addressed. In political terms, this is often called “setting the agenda.” The issues and objectives may involve data or information, constraints, alternatives, values, and outcomes. In this case, it is easy to imagine any of these three CAOs skillfully turning an agitated constituent group away from the question of whether their institution will continue on as a liberal arts institution, to a question of how the institution will do so. As Morgan stated, all of this can allow the leader to exert considerable influence on the decision that emerges. As the author notes, “Eloquence, command of the facts, passionate commitment, or sheer tenacity or endurance can in the end win the day” by adding to the leader’s power (p. 174).

Finally, Morgan (2006) notes that becoming an effective leader ultimately hinges on the ability to create a shared sense of reality. This is also key to the formation of an organization that is able to move forward effectively, as cohesive groups are characterized by a shared vision while fractured groups are characterized by multiple realities. This is tied to the ability to achieve organizational change, as the actions taken by organizations are tied to the images and values it holds. For this reason, Morgan notes that effective organizational change always implies cultural change. By engaging with key constituents in a way that conveys the full picture of the institution, its context, and
its challenges, the CAOs in this study, as well as CFO2, CFO3, and CFO4, were essentially creating a shared sense of reality among the constituents of the institution, and particularly faculty. As CFO4 stated, faculty need to be “enfranchised in what I do.”

There are three remaining critical points that I would make with regard to the leadership styles exhibited by the CAOs. One involves the fact that the developmental culture is intended not only for personal development, but more importantly for the development of the members of an organization. On a college campus, this includes all constituencies, and of particular importance in this respect are faculty. I believe that one significant reason the CAOs in this study were so committed to engaging with faculty colleagues was the care they had for them personally, as well as fact that they viewed them as critical members of the institution. Three of the CAOs were not reticent in expressing their frustration to me during the interview concerning the difficulty in bringing about needed changes, especially where faculty were concerned. However, the daunting financial situations their institutions were confronting provided concern and urgency for the CAOs regarding the changes. Even in the face of these factors, I did not sense that these individuals were resulting to authoritative tactics. To the contrary, these individuals seemed committed to educating their colleagues and bringing about an understanding of what needed to be done and why. And, they reported actively seeking the input of trusted colleagues in this process. As a result, and consistent with the developmental culture, they were also seeking to become further educated in the process.

Another critical realization I came to after considerable reflection was a possible explanation for the way in which the CAOs did not look to deal with faculty as a group, and sought instead to engage with individuals and small groups. This also provides a
possible explanation for the way in which these individuals voiced support for shared governance, but simultaneously did not extend this to the need for consensus in decision-making. Steven Covey (1991) provides a very useful differentiation between power and influence. Covey uses the metaphor of the trim tab on ships to illustrate this point. As the author notes, it is very hard to steer a ship by moving its large and heavy rudder due to the enormous forces that resist that change. To do so would require tremendous power, and would also place substantial stress on the components involved. As a result, as Covey notes, a small device called a trim tab is used to avoid the need for moving the entire rudder by force alone. By moving this small device known as a trim tab, vacuum pressure is exerted that allows the rudder to be moved much more easily, without the tremendous forces required and while avoiding the great stresses on the components. I suggest that the metaphor of the trim tab provides a very useful way to view the engagement of the CAOs with key, trusted, influential individuals and small groups of faculty rather than attempting to move the faculty in its entirety.

The third point also references the work of Steven Covey (1991). Covey is a proponent of positivity and appreciative inquiry, and this is seen in his 30 methods of influence. But importantly, Covey also provides three categories of influence in which these 30 methods exist: 1) to model by example (others see); 2) to build caring relationships (others feel); and 3) to mentor by instruction (others hear). As discussed, the CAOs in the study expressed significant levels of stress resulting from the difficult circumstances their institutions were facing and the need for structural changes required to meet the corresponding challenges. Collins (2011) discusses the Stockdale Paradox, based on the story of Admiral Jim Stockdale who survived eight years and was tortured
over 20 times while a prisoner of war during the Vietnam War. The way in which Stockdale survived is expressed in a straightforward way: maintaining an unfailing optimism while simultaneously confronting the brutal facts. Harrison and Mather (2016) discuss the importance of maintaining a positive approach while dealing with difficult problems: “If we put our primary attention on problems – even solving those problems – we are in danger of taking our identity from those problems” (p. 149).

The stress, anxiety, and frustration related by the CAOs in this study was not surprising. Indeed, it would have been very surprising if this had not been the case. But while these leaders described the brutal facts in a very forthcoming way, they also displayed enormous determination and optimism that their institutions would ultimately survive. The way in which the CAOS were going about this seems consistent with developmental culture, as well as the three categories of influence described by Covey: 1) to model by example (others see); 2) to build caring relationships (others feel); and 3) to mentor by instruction (others hear).

**CAOs and CFOs compared.** Key differences were revealed in the ways that CFOs and CAOs approached leadership, change, and decision-making. Generally, CAOs were much more politically engaged with constituents across the institution than CFOs. As already discussed, CAOs focused on building and maintaining relationships, and used them synchronously for dual purposes: providing information to the constituencies to help build a shared reality, as well as gathering information to support their reasoning and decision-making. The CAOs all described how important the information gained was in their reasoning and decision-making. The manner in which they engaged with constituents also helped build cohesion within the institution so that difficult initiatives
and changes were more likely to succeed. These leaders were using influence rather than power to help implement their decisions.

At the same time, CFOs played a very important role in formulating key decision points for the CAOs. For example, they provided essential information concerning the availability of resources to support existing and new initiatives. As already noted, CFOs were more process-oriented and as a result formal institutional decision-making on budgets and resource allocation was more participatory and collaborative.

In the end, both of these approaches helped break down the barriers between the organization and its environment. In turn, this helped the institution become less routinized, less dependent upon single-loop learning and programmed decisions, and evolve toward becoming a learning organization. However, creating learning organizations that are capable of constantly monitoring their environment and formulating appropriate response may be difficult and painful for the members who want to continue their ritualized, insular existence. As Morgan notes, the organization needs “to engage and experience the environment as fully as possible.” CAO1 employed a description during their interview that invokes this reality: “And I think that’s the culture that many of us have come up with. And so I think that anything that deviates from that, it’s not just a change, it’s a really scary change.”

One of the most interesting aspects of the CFOs in this study was the way they spoke to the importance of unstructured information in their decision-making. The interviews revealed significant levels of emotional intelligence among CFO2, CFO3, and CFO4. This emotional intelligence resulted in another important factor playing into their decision-making: the impact of the decisions and resulting changes on the people in the
institution. This observation was somewhat surprising based on my own previous professional experience with CFOs, but it was very affirming as well. It also provided another possible reason for the way in which Institution-2 and Institution-4 seemed to moving forward well with significant changes as related by the CAOs and CFOs.

**Information in decision-making.** This area of investigation became quite important in understanding many aspects of the institutions and the participants. For example, it provided insight into the lack of preparedness on the part of the institutions for the environmental disturbances that developed around them. It also led to key insights about the participants, and particularly the approaches of three of the CAOs in the study.

Four aspects of data and information used to support decision-making were developed from the participant interviews: systems-based data, Institutional Research offices, participant information gathering and use, and the role of structured and unstructured information. Each will be discussed below.

Three of the institutions were found to be committed to evidence-based decision-making. Only at Institution-3 was this not a strong point of emphasis. At the three institutions in which this was the case, all reported being compromised in their decision-making ability by insufficient authoritative information. The CFOs reported a significance reliance on spreadsheets from multiple sources in which they lacked a high level of confidence. Multiple factors contributed to this problem, but perhaps chief among them as reported by the participants were problems with the enterprise resource planning (ERP) systems used by the schools including serious data integrity issues they were working to solve. Because these problems had clearly existed for some period of
years, the question of whether information had ever played an important role in decision-making surfaced as a significant question. As previously discussed, all four institution provided accounts indicating a previous dependence on routinized, programmed decision-making and problem solving that strongly suggested single-loop learning. It is likely that data used previously to make decisions at these institutions was basic, such as monthly budget reports. Indeed, CFO1 spoke to the way in which this was still largely the case at their institution.

One of the most significant changes at the institutions over recent years had been the strengthening of the Institutional Research functions at the schools. Institution-1, Institution-2, and Institution-4 had all sought to strengthen this capability as they sought data to enable evidence-based decision-making. Notably, these were the three institutions with relatively new presidents as reported earlier. In addition, the CAOs and CFOs at these institutions were all heavily dependent on information as described in preceding sections of this report. Only at Institution-3 had Institutional Research changed little. Interestingly, CAO3 stated in their interview that “I am currently assessing the information needed to support decision-making.” CAO4 reported that when they had become the CAO, a period of less than five years ago, “we literally had no IR office.”

The search for information by the participants ultimately proved a key factor in understanding these institutions. Only CFO1 and CAO3 did not report their significant efforts to gather information to support their thinking and problem-solving. CAO1, CAO2, and CAO4 in particular spoke to the way in which they all sought information both inside and external to the institution. As CAO4 described, “I cast the net as broadly
as I can.” These three CAOs also reported engaging others outside the institutions, including in business, as a way of gathering ideas and finding new approaches to problems. These three CAOs and CFO2 discussed how their presidents were also heavily engaged with colleagues, organizations, and networks outside the institution. A number of references were made of the way in which these were subsequently “brought to the table” for discussion. Although for a time I understood this as a basic need for information to support decision-making, I later found that explanation to be somewhat superficial.

This quest for information outside the information is likely best seen in the context of boundary spanning. The ways of conducting business at the institutions previously had proven ineffectual in dealing with current external pressures. As well, these individuals were all dealing with insular organizations and frequently with individuals and groups in which lack of trust was specifically mentioned. By gathering extensive information from both the internal and external environments, and bringing that information back into the organization for discussion with key constituents, these three CAOs were not only satisfying their need for information. They were also creating common realities, lowering organizational boundaries, engaging constituents in collaborative decision-making, building cohesive relationships, and developing trust. Senge (1990), Morgan (2006), and Bess and Dee (2012) all discuss the way in which individuals can learn and act strategically on information, but that this does not equate to a learning organization. However, these authors also note that when these actions spread and influence others to act similarly, the organization is evolving toward becoming a
learning organization. In this way, the CAOs were making it safer to leave Plato’s Cave
and interact more comfortably with the outside world.

In similar fashion, I was somewhat surprised that all participants in this study
spoke of the importance of both structured / quantitative and unstructured / qualitative
information. The degree of importance, or weight, placed on these varied to a degree by
participant. I would have expected the CFOs to be much less concerned with
unstructured information, given their dependence on numbers including budget and
financial data. However, in the end the participants all spoke to the importance of both
types of information. However, it must also be noted that there was little differentiation
made by the participants regarding data and information. As CAO2 described this, “For
me, it’s all data.” This largely represented the way all participants understood the nature
of information, but did not differentiate insofar as the name was concerned.

Two key factors played into the importance of unstructured information. First
was the fact that while numbers were viewed as “hard data,” having a “qualitative
overlay” was also very important. As CAO4 described this, “I think that good leaders…
you know, the data will take you so far, and then the rest you have to do on your own.
And there the qualitative stuff becomes really, really important.” The other factor that
proved very revealing in the interviews was the way in which engaging with constituents
was seen as gathering intelligence that would be factored into decision-making. Again,
this reflects the judgments required to evaluate the impact of changes in private liberal
arts institutions that were all over 100 years old. As Bess and Dee (2001) observe, all
decisions are “value laden” and involve at least implicit assumptions about human values,
as well as goals and objectives of organizations. The way in which the participants
reported “walking around” and talking with faculty was very telling in this way. As CAO2 described it, “I’ll have a lot of individual meetings with faculty. You know, see where they are, feel them out. Have that conversation.” When asked, CAO2 confirmed that they indeed viewed this as “intelligence.”

**Implications for Research and Theory**

This study resulted in several interesting implications for further research as well as theory development. Three of these are discussed below.

First, the interpretive analysis of this study lends itself to closer analysis, particularly from a theoretical basis. Additional research would help assess the effectiveness not only of the interpretations from this study, but also for the real-life applicability of these theories generally. This could include further testing the six cultures model espoused by Bergquist and Pawlak (2007), as well as the boundary spanner construct as espoused by Bess and Dee (2012), among others. Private liberal arts colleges provide a living environment for testing the validity and applicability of theories in real organizations confronting serious threats and challenges. Further, these are not static situations, but rather dynamic, evolving organizations and environments. In this way, it may be possible to develop theories to help explain diachronic contexts and organizations that are in the process of evolving.

The second implication of this research involves testing the contingency theory of organizations (see Morgan, 2006). From a larger, more overarching perspective, the institutions in this study display many of the characteristics that invoke the contingency theory. These include the way in which the private liberal arts institutions, by whatever means this may have been initiated with respect to each institution individually, moved
past an insular existence and began an intentional struggle to survive. Morgan states that
the first characteristic of contingency theory is that organizations require the ability to
satisfy and balance internal needs and to adapt to external circumstances. As the author
states, “survival is a process” and if survival is seen as the “primary orientation,”
management of the organization has increased flexibility and can formulate goals “within
a more basic and enduring process” rather than becoming ends in themselves. It also
helps focus the organization on the acquisition of resources required to survive as a
primal need. At its core, contingency theory is imminently practical in this regard.

Contingency theory was developed by Burns and Stalker in the 1950s and has
become a mainstream way of viewing organizations as organisms. In referencing the
work of Burns and Stalker, Morgan states that, “when change in the environment
becomes the order of the day, as when changing technological and market conditions
pose new problems and challenges, open and flexible styles of organization and
management are required” (p. 43). As discussed previously, the institutions in this study
were transitioning on many fronts in order to better monitor and respond to their
challenging environments.

It is interesting to note that Institution-3 was an outlier in this regard. Most of the
changes and responses that were seen at the other institutions in this study had not
occurred at Institution-3. The words of CFO3 are insightful here. For while CFO3
appeared still dedicated to finding ways to move their institution forward, the participant
also displayed frustration and resignation in not being able to do so. As this leader
described it: “Because right, they haven’t felt any pain.” “They got their increases,
things are moving along.” “You know, they’re still teaching their Tuesday Thursday.”

“You know, it ain’t a bad career.” But in a different vein, CFO3 said:

As I sit now at [Institution-3], is that given our finances, there are a number of things that we desperately need to do now. Like the house is on fire. And it’s been very hard to move those along. Very hard.

The CFO added, “We’re not sustainable at this point. We’re definitely not sustainable.”

The third opportunity for research and theory development is one that involves what I have come to believe may be three phases that these institutions undergo in their evolution along a continuum. The first phase is Insularity and Inertia. This is characterized by single-loop learning, routinization and programmed decisions, a high level of insularity with separation from the external environment, and prevalence of the managerial and collegial cultures. The historical values and traditions of the institution provide the foundation for a strong culture that is resistant to change.

The second phase of this model is the Transactional Phase. This is characterized by significant changes in the external environment that present substantial pressures on the institution. In the four cases under study, the pressures included declining enrollments and rising costs, and as a result a serious reduction in net tuition revenue, among other factors. Because these institutions are heavily tuition-dependent, lack of net tuition revenue to sustain the operations of the school begins to be felt across constituent groups. The responses by the institution in this phase involve cost-cutting, reduction in force, and sometimes sale of assets. But importantly, it does not involve seeking more strategic and structural responses including significant changes to academic offerings and programs. Little value is placed on information to guide decision-making, and single-
loop learning is dominant. The responses in this phase are reactionary and tactical. Inadequate awareness exists concerning the external environment, there are few mechanisms to effectively develop institutional responses to that environment. Internal pressures and frustrations increase within the institution, and board of trustees may become increasingly concerned.

The third phase is the Transformational Phase. In this phase, institutions are likely to seek changes to senior leadership, to move past chronic cost-cutting, and to develop evidence-based decision-making. Boundaries with the external environment are lowered, and active monitoring of the environment begins. Boundary spanners may play an important role as information must be passed across the organizational boundaries in two directions, both internally and externally. Boundary spanners also play a very important role in institutional strategic development. Agility and adaptability become more acceptable, and significant changes occur in academic programs while the institution seeks to protect the core of their existence, the liberal arts. The developmental culture becomes more prominent, and double-loop learning becomes the norm, which triggers the evolution of the organization toward becoming a learning organization.

**Implications for Practice**

The majority of liberal arts colleges are in serious trouble, and their numbers are declining rapidly (Breneman, 1994; Ferrall, 2011). Finding ways to deal effectively with challenges in their internal and external environments is of paramount importance if these institutions are to survive. The findings of this study should be evaluated carefully and objectively for use by institutions and senior leaders. The findings identify approaches and techniques being employed by practicing professionals at functioning institutions that
have been reported as useful and effective. Further, institutions in this study are undergoing significant change. As CAO4 indicated, the situation faced today by many institutions does not afford the luxury of trial-and-error approaches.

Among the practices suggested for evaluation by institutions facing similar challenges are the following:

- Acknowledging that insularity and inertia (including cost-cutting, single-loop learning, and programmed decision-making), as well as transactional responses (including cost-cutting and layoffs), are not effective in addressing fundamental challenges; the storm will not merely pass over if we wait.

- Changing institutional leadership if it becomes apparent that existing leaders are unwilling or unable to help their institutions confront the brutal facts and develop useful solutions.

- Finding or identifying boundary spanners that can help the organization lower its boundaries and become more environmentally aware and responsive.

- Embracing the developmental culture as a way of engaging and educating the campus community.

- Employing positivity and appreciative inquiry while dealing with stressful circumstances and painful decisions.

- Reaffirming the importance of liberal arts education, while finding ways to sustain the ability to offer these opportunities in a world in which they have never been needed more so than today.
- Engaging faculty and keeping them enfranchised in decision-making and changes, while also making clear that while collaboration is highly valued, consensus may not be the end game.

- Developing evidence-based decision-making capabilities to support decision-making, while also understanding that vital information can be both structured and unstructured in form.

- Addressing current operational problems swiftly and effectively, while understanding that structural changes are likely required as well.

- Approaching academic restructuring and academic program diversification as opportunities that are in the best interests of students.

- Implementing more formalized and participatory processes for decision-making to replace personality-based decision-making, particularly in strategic planning and resource allocation.

- Maximizing student recruitment while also supporting selectivity, as well as student success and retention.

- Finding effective ways to convey the fundamental importance of liberal arts education in ways that are directly relevant and appealing to students and parents.

- Maximizing opportunities for operational efficiencies, and embracing these as ways to keep liberal arts education more affordable and accessible to students.

**Summary**

As revealed in this study, private liberal arts colleges must find ways to adapt if they are to survive. Most private liberal arts colleges are heavily tuition-dependent, and as a result cannot survive in a chronic state of budget deficits. Difficult decisions are
required. Yet change is exceedingly difficult, and survival is a process. Finding ways to adapt to these changes through positive, appreciative approaches is exceedingly important in order to move the institutions forward, while most importantly caring for and involving the individuals and groups within the institution. It is foolish for institutions or their members to believe that if we wait long enough the storm will simply pass over. It is vital that private institutions move forward in way that confronts the brutal facts while maintaining an unfailing optimism and determination.

As noted in Chapter 1, the question of whether private liberal arts colleges survive is not the same as the question of whether liberal arts education survives. Liberal arts colleges are indeed declining in number. At the same time, as these institutions morph into other types of institutions many, including the four institutions in this study, are reaffirming commitment to the liberal arts. In turn, they are finding ways to survive financially by finding other sources of operating revenue so that they can continue to offer educational programs based on a liberal arts foundation. Some may judge this adaptation as an abdication of these institutions’ responsibilities to their traditions, identities, and missions. However, perhaps in another way they are making the necessary and often painful decisions that will ultimately allow them to survive in order to fulfill their missions. Clearly, the alternative of extinction precludes the opportunity of these historic institutions to support liberal arts education as they have done for generations of students for over a century.
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Appendix A: Introduction to Participants

Stevens Institute of Technology
1 Castle Point on Hudson
Hoboken, NJ 07030

[Date]

[Participant Name / Address]

Dear [Participant Name]:

By way of introduction, my name is David Dodd and I am the Vice President for Information Technology & CIO at Stevens Institute of Technology. I am also completing a PhD from Ohio University and conducting research in higher education administration. The study involves decision-making by senior academic and senior financial leaders in small colleges and universities with a strong commitment to a liberal arts curriculum. You were selected for participation in this study as a result of your position as [Participant Title and Institution].

Liberal arts institutions are facing significant challenges. In this there is little doubt. The plights of these institutions have been described by authors using such terms as “endangered,” “at the brink,” “cannot survive,” and “death spiral.” Yet liberal arts institutions are also highly mission-driven and very resilient. There is abundant evidence to demonstrate the difference such institutions make in preparing our next generation of citizens and leaders. My own passion for such institutions derives from some of the most formative experiences in my own life.

I am writing to request your participation in this research. This is a qualitative study involving decision-making context, institutional processes, and the use of information and decision-support tools within liberal arts institutions. Participation is completely voluntary, of course. Your participation would be limited to meeting with me for approximately one hour to answer a series of structured, open-ended interview questions. Your participation in this study and the information you provide would both be held in confidence. I am required to disclose that there will be no direct benefits or compensation to you personally from your participation in this study.

I would respectfully ask that you agree to participate in this research and to provide one hour of your time. It is my hope and intention that this research will result in information that can be shared with participants in a summarized and anonymized manner that may help highlight effective strategies and resources used by the institutions participating in this study.

In the next few days I will be in contact with your office to try and arrange a time when we can meet for the interview, either in your office or at a place and time of your convenience.
Thank you most sincerely,

David Dodd
Appendix B: Interview Questions

Statement to Participant:
The questions we will be discussing today relate to what have been found to be very important decisions made by institutions, particularly related to decision-making in the areas of adherence to mission, academic quality, financial health, and similar areas. Stated concisely, these decisions involve what has been termed revenue generation to support operating budget of the institutions, and resource allocation to support the activities of the institution. Previous research has found that these two categories actually encompass a number of highly interrelated factors such as enrollment size and composition, student selectivity, cost of attendance in tuition and fees, US News Rankings, academic programs, financial aid, and similar factors. Research shows that these kinds of decisions have significant impact on institutions academically and financially. The questions we will be discussing involve the context for these decision at your institution, the process by which these decisions are made, drivers and influences on these decisions, resources and tools used to support these decisions, and data and information that may be used to guide these decisions.

Questions:

I. Participant

1. I have your job title as [job title]. Do I have this correct?

2. May I ask how long have you been in this position?

II. Institutional Environment and Context

3. What role does adherence to a liberal arts tradition and mission play in the decisions you make, particularly in the areas I mentioned earlier?

4. Can you describe potential conflicts and tensions that exist in these areas?

5. Are there any key outcomes or changes that [name of institution] has sought in these areas that we are discussing within the past two to three years?

6. Can you describe your constituencies, and what role they play in your decision-making, particularly in the context of shared governance?

III. Decision Process

7. Can you describe your role in these decisions, as [job title]?

Potential follow-up questions:
Would you say you are very involved personally in formulating these decisions, or is your role more to receive recommendations from others for the decisions?

Do you make the final determination on these decisions, or do you seek approval for the decisions from others? Can you describe the approval process?

8. Can you briefly describe any formal structure or process by which kinds of recommendations and decision I described are made here at [name of institution]?

9. Can you describe any framework, set of guidelines, or recognized strategy that guides these decisions?

10. How would you describe the ways that you go about navigating conflicts and tensions in decision-making in these areas?

11. How would you describe your engagement and collaboration with the [CAO / CFO, as counterpart to the participant’s function] concerning institutional decision-making in the areas of resource allocation and revenue generation?

12. Previous research suggests that decision-making in colleges and universities is characterized by a variety of different styles and approaches. Are there specific words or phrases you can think of that describe the decision-making style or approach here in which the kinds of decisions in these areas here?

13. If I could ask you, how well do you think decisions that are made concerning institutional strategy and direction generally match your own priorities as [CAO / CFO]?

IV. Decision Support

14. Can you please describe the significant tools or resources that are used to support decision-making?

15. In what way does data or information play a role in decision-making at [name of school] in the areas we are discussing?

Assuming affirmative response, follow-up questions to be asked:

a. Can you tell me about the data or information that’s available?

b. Is the data or information produced in response to requests, or is it produced proactively in anticipation of need?

c. Would you characterize this data or information as primarily:

• tactical or operational, about how the institution has been performing
• strategic, about opportunities that exist and perhaps how to take advantage of such opportunities
- both tactical and strategic information is available.

d. To what extent do you believe this data or information bears on the ultimate decisions that are made?

e. What is the source of the data or information that you personally use in decision-making, and who provides you with it? How much confidence do you place in this data or information as you make decisions?

f. What is the role of the Institutional Research Office here with regard to the decision-making we are discussing?

g. On a scale of 1 to 10, how much do you rely on structured information, such as numbers and analytics?

h. On a scale of 1 to 10, how much do you rely on unstructured information such as news reports, competitor websites, or any other information that isn’t based solely on numbers?

i. Do you think these sources of information have equal weight in your own decision-making?

j. Can you tell me if there have been any significant changes in the kind of information that you have used in decision-making over the past five years?

16. How effective do you think the Institutional Research Office is at [name of school] in meeting the information needs of the campus to support decision-making?

17. Does the Institutional Research Office gather and provide any information on the external environment of the school, for example about trends, social changes, economic conditions, etc.?

18. Can you describe any specific steps [name of school] might have taken over the past five years to gather, analyze, or make available information to support decision-making in the areas we are discussing?

19. If you could have any additional tools or information to support your decision-making, what would they be?

20. How well do you think [name of school] measures institutional performance and progress against goals?

V. Other Considerations

21. Is there any other information concerning decision-making and institutional direction and performance that you think should be considered, or that you would like to mention?
Appendix C: Documents and Information Artifacts

Documents and Information Artifacts to Be Requested:

In order to help construct a better understanding of decision-making at your institution, I would ask that if there documents, webpages, records of meetings, and similar information available, if you could please direct me to someone who could help provide them.

a. Documents pertaining to various elements of the decision-making processes in the areas previously mentioned
b. Lists of committees, including membership, that are charged with various parts of the decision-making process in the areas previously mentioned
c. URLs of webpages that reference various aspects of the decision-making process, including information used to formulate or support decisions
d. Notes of meetings that you can make available concerning in which decisions or recommendations in the areas mentioned were made or developed
e. A list of key statistics, rankings, and points-of-pride concerning your institution that factor significantly into decisions
f. A list of analyses and reports that play important roles in developing recommendations and decisions at [institution name].
## Appendix D: Cross-Case Analysis Example

### Category: Institutional Tensions and Change

#### Theme: Un unsustainable model – insufficient and shrinking net tuition revenues.

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#### Theme: Changing student demographics – fewer students available, less able to pay, more minorities, higher competition.

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#### Theme: Consumer-driven focus of parents and students concerned over ROI of education; far more questioning of the value of a liberal arts education.

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#### Theme: High cost of operations for small institutions, and correspondingly high cost of attendance for students.

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#### Theme: Resistance to change.

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#### Theme: Institutional unpreparedness, including traditionally weak structures, processes, and data for decision-making.

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#### Theme: Board of trustees that were traditionally unhelpful in finding solutions.

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# Appendix E: IRB Approval Certificate

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<td>Rebecca Cale (<a href="mailto:cale@ohio.edu">cale@ohio.edu</a>)</td>
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<td>David Dodd</td>
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The Social/Behavioral IRB reviewed and approved by expedited review the above referenced research. The Board was able to provide expedited approval under 45 CFR 46.110(b)(1) because the research meets the applicability criteria and one or more categories of research eligible for expedited review as indicated below:

| IRB Approved: | 01/23/2017 10:37:19 AM |
| Expiration:    | 01/23/2018 |
| Review Category: | 7 |

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. In addition, FERPA, PPRA, and other authorizations must be obtained, if needed. The IRB approved consent form and process must be used. Any changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

The approval will no longer be in effect on the date listed above as the IRB expiration date. A Periodic Review application must be approved within this interval to avoid expiration of the IRB approval and cessation of all research activities. All records relating to the research (including signed consent forms) must be retained and available for audit for at least three (3) years after the research has ended.

It is the responsibility of all investigators and research staff to promptly report to the Office of Research Compliance / IRB any serious, unexpected and related adverse and potential unanticipated problems involving risks to subjects or others.

This approval is issued under the Ohio University OHRP Federally Wide Assurance #00000095. Please feel free to contact the Office of Research Compliance staff contact listed above with any questions or concerns.

https://ecoresearch.ohio.edu/research/eco/IRB/view/ApprovalCertificate.eco?formId=4857