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Strategic Indicators at Assemblies of God Colleges

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STRATEGIC INDICATORS AT ASSEMBLIES OF GOD COLLEGES

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STRATEGIC INDICATORS AT ASSEMBLIES OF GOD COLLEGES

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The purpose of this Delphi study was to identify strategic indicators for use at Assemblies of God colleges. Strategic indicators are metrics which synthesize data to report on the current condition and trajectory of an institution in terms of the institution's ability to pursue its mission. While some indicators are useful to almost all types of institutions of higher education, other indicators reflect the unique mission and goals of the individual institution. These indicators can be used to monitor trends over time at the same institution, or to compare data among a group of peer institutions. Peer institutions compare their indicator data in order for academic leaders to see how their own institution is faring in relation to its peers.

This study consisted of three Delphi rounds, using a panel of 40 academic leaders from five Assemblies of God colleges. The panel identified the spiritual formation of students as the most important aspect of the mission of Assemblies of God colleges. The integration of faith and learning was identified as the main contributor to spiritual formation. The panel selected a total of 28 strategic indicators, 14 of which were selected from among indicators that are typically used in higher education. The panel also selected 12 indicators that were suggested by panelists, as well as 2 indicators that were suggested

by the researcher. The panel reported that the set of indicators they identified would provide a suitable framework for data sharing among Assemblies of God colleges.

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Chapter I

Introduction

The modern higher education environment is challenging for all types of institutions. Small colleges affiliated with a religious denomination face a set of challenges that are particularly daunting. Andringa (2009) estimates that, of the 882 religiously affiliated colleges in the United States, all but 100 operate in circumstances that are among the most challenging in higher education. These circumstances are typified by little or no income from sources other than student tuition (p. 171) and a competitive disadvantage compared with public institutions that cost far less to attend (p. 174).

This research focused on the 12 accredited colleges that are endorsed by The Alliance for Assemblies of God Higher Education (AAGHE), with an aggregate headcount enrollment of 14,243 (AAGHE, 2012). The endorsement process is concerned specifically with matters of importance to the Assemblies of God and avoids redundancy with regard to the criteria of accreditation agencies (AAGHE, 2010). All endorsed colleges must adhere to AAGHE standards, which include the requirement that at least 90% of an endorsed college's governing board members be ministers or church members within the Assemblies of God (p. 3).

As with any organization, the future of Assemblies of God Colleges relies on remaining true to their respective missions. The mission guides strategy to ensure that resource allocation is continually pushing the institution to advance in the direction of its mission (Taylor & Massy, 1996; Townsley, 2009). In order to create and implement

effective strategies in higher education, decision makers must have timely and accurate information on key strategic values (Taylor & Massy, 1996). More than 300 strategic indicators have been suggested in order to supply timely and accurate data (Brubacker, 1979). However, individual institutions must decide which indicators are the most important to them, given their unique institutional history, size, location, and mission (Taylor & Massy, 1996). Moreover, for indicators to be truly useful to decision makers, information on the same indicators they consider important at their own institution must also be available from comparable institutions (p. xii). Taylor and Massy (1996, p. xv) suggest that institutions identify indicators in order to regularly compare data with competitor institutions, fellow universities in a state system, or colleges affiliated with the same religious group. Therefore, the purpose of this study is to identify a set of strategic indicators deemed most useful for regular comparison of data among Assemblies of God Colleges.

Context

In the 1970s, academic leaders realized that the *golden age* of American higher education was coming to an end; not only were multiple changes occurring, but the rate of change was accelerating (Prinvale, 1992). Hence, the stage was set for the historic response to a special report entitled "The Financial State of Higher Education," (Lupton, Augenblick, & Heyison, 1976). This article demonstrated the usefulness of indicators, providing statistics that motivated leaders in higher education to further explore the use of indicators (Frances & Stenner, 1979). Thereafter, technical seminars and conferences were held to further develop the use of financial indicators, and their findings were

published in an edited volume (Frances & Coldren, 1979). The main goals for the first indicators were to determine if an institution's financial situation has improved or deteriorated since the previous year, as well as determine if the institution is currently financially healthy and living within its means (Minter, Nelson, & Robinson, 1980; Chabotar, 1989).

In 1983, Keller's work influenced the field; it reinforced the concerns of academic leaders that the institutions of higher education in America suffered from a lack of strong central control, a clear academic mission, and adequate planning (Prinvale, 1992). As a result, strategy became the buzzword among academic leaders and the subject of an avalanche of research in higher education (p. 3). A series of groundbreaking publications by The Association of Governing Boards of Universities and Colleges (AGB) first served to link the use of indicators with strategy (Taylor, Meyerson, Morrell, & Park, 1991). The AGB later published similar works in cooperation with Peterson's, a private company that specializes in data collection among institutions of higher education (Taylor & Massy, 1996; Taylor, Meyerson, & Massy, 1993). These works encouraged the use of indicators to determine strategic position, which they defined as "…an honest assessment of how an institution is doing and where it is heading" (Taylor et al., 1991, p. 1; Taylor & Massy, 1996, p. xi).

The sense of institutional mission was central to the works sponsored by the AGB and AGB/Peterson's, where the most important use of indicators is to provide useful data to decision makers who have strategic vision. This vision is defined as a perspective "which objectively balances limits and possibilities, negotiates between present and

future needs, and translates mission and history into an enduring vision of tomorrow. Without such a perspective, institutions may lose their way, drift, or even founder" (Taylor et al., 1991, p.1). Taylor and Massy (1996) articulated the usefulness of indicators for academic leaders who are working to create strategically focused institutions in order to curb random growth, rein in spiraling costs, and stem institutional drift.

Financial indicators receive the most attention from researchers and academic leaders. The most widely used indicator of financial health is the Composite Financial Index (CFI), as described by KPMG et al. (2010). The CFI is a ratio that reports the general financial health of the institution using data produced by standard accounting practices. The CFI is figured from four ratios, each of which reflects financial health: (a) financial flexibility and sufficiency, (b) debt management, (c) overall asset return and performance, and (d) operating performance results. In addition to financial indicators, Taylor and Massy (1996) include indicators that report on physical capital – plant, land and equipment; information capital – library and computer resources; and human capital – faculty, staff, students, and alumni. Nonfinancial indicators were originally used to determine which nonfinancial indicators are predictive of financial indicators (Lee, 2008). The last 20 years of indicator research have seen a steady increase in the use of nonfinancial indicators to more broadly inform on trends of strategic importance. Examples of important nonfinancial indicators include the percent of applicants accepted, the percent of accepted applicants who enroll, student persistence, and demographic data on students and faculty (Taylor & Massy, 1996).

At a single institution, the value for any indicator does not become useful to decision makers until it is seen in a larger context. An institution's data from the current year only become useful, and sensitive to trends, when compared to data from the same indicators in previous years. In a manner analogous to comparing multi-year data from the same institution, indicators become informative and sensitive to trends when they provide data that are regularly compared among peer institutions (Minter et al., 1980). For academic leaders to effectively use indicator data, they should have access to a set of carefully selected peer institutions that compare indicator data (Taylor et al., 1991; Taylor & Massy, 1996; Teeter & Brinkman, 2003).

National averages for key indicators at different classifications of colleges and universities are commonly provided to give academic leaders an idea of how their institutions compare to roughly similar institutions (Taylor et al., 1991; Taylor & Massy, 1996; Taylor et al., 1993; KPMG et al., 2010). These classifications always group institutions by control (public or private), but differ greatly in the additional criteria by which institutions are classified for comparison. Examples of classifications for the purpose of averaging indicator data include institutional type (2 or 4 year), enrollment size, budget size, tuition cost, and the presence of more than one campus, a graduate school, or hospital. These national averages group institutions according to generalized criteria, and have no means by which to consider their individual missions and aspirations. Therefore, researchers have encouraged institutional leaders to identify comparative peers according to commonalities that appear most relevant to understanding their own institution's strategic position (Brinkman & Teeter, 1987; Teeter & Brinkman,

1992; Terezini, Hartmark, Lorang, & Shirley, 1980). Thus, some institutional leaders have created their own lists of comparative peers using various criteria, such as mission, size, location, similarities in programs, demographic similarities, shared governance, and aspirations for the future (Weeks, Puckett, & Daron, 2000).

In this study, indicators of strategic position are identified that are suitable for use at Assemblies of God colleges. These institutional leaders can identify common indicators and benefit from sharing indicator data, given the overarching similarities shared by these institutions. Similarities are related to missions that are dedicated to the tradition of Pentecostal higher education. Each institution also has deep historical and governance ties with the Assemblies of God. These colleges offer similar programs of study, focused on liberal arts, professional programs, and ministry related programs. Moreover, Assemblies of God colleges (a) rely heavily on tuition, and (b) are all small, with a mean headcount enrollment of 1,187 students and a range from 25 to 2,703 students (AAGHE, 2012).

Problem

Religiously affiliated institutions are among the most at-risk colleges in the United States. Their enrollments are often far below the clutch size of 2,500 students, and they are heavily tuition-dependent, with endowments that are often nonexistent and rarely exceed $10 million (Martin & Samels, 2009). Like the other 1,600 private colleges in the United States whose endowments are less than $10 million, religious colleges are at a serious disadvantage competing for students with public institutions that are far less costly to attend (Andringa, 2009). The modern higher education marketplace has caused

the financial situation of most religious colleges to deteriorate and has driven some to closure. According to Andringa (2009), former president of the Council for Christian Colleges and Universities, "Perhaps the majority of the country's religiously affiliated colleges and universities. . . will survive, but not if they continue many of their present-day business practices" (p. 178). At the same time, he also proposes that for religiously affiliated colleges the "future can be brighter than that of nonreligious campuses if they leverage their distinctiveness" (p. 168). In short, the key to survival, and even thriving in years to come, is coherence of mission in resource allocation, planning, and all other activities on campus (Andringa, 2009; KPMG et al., 2010; Taylor et al., 1991).

The uniqueness of institutional mission is of strategic importance in the modern higher educational marketplace, where institutions must distinguish themselves in order to attract students (Alfred, 2006). The importance of institutional distinction is especially relevant to small private colleges that must demonstrate an added value in order to justify increased price (Clark, 1970; Stimpert, 2007). Hence, Assemblies of God colleges would do well to go beyond the usual suite of indicators that report on finance, enrollment, and academic quality to create indicators that report on how well they are achieving and maintaining distinction in terms of the stated mission.

In June of 2011 Bethany University, a 92 year-old Assemblies of God college, announced that classes would not resume in the fall. After years of financial problems and an unusually low enrollment year, Bethany University was forced to close (Louie, 2011). This closure left leaders at other Assemblies of God colleges asking questions such as: What warning signs went unnoticed? Can the same thing happen to other

Assemblies of God institutions in the future? How can other Assemblies of God colleges know if they are in danger? These are all questions that can be answered by the identification of strategic indicators, the subsequent use of data to monitor trends over time at the same institution as well as comparing indicator data with peer institutions. To date, Assemblies of God colleges have not yet developed a common set of strategic indicators.

At institutions of higher education data of strategic importance are already available (Sapp, 1994). Basic financial information is required by law and is part of accounting practices. Other data of strategic importance, such as applicant acceptance rates, admissions/yield ratios, and student attainment rates, are monitored for a variety of purposes such as accreditation and governmental regulations (Marwick, 1988; Taylor et al., 1991). In this study, participating colleges already report these data to the denominational headquarters (AAGHE, 2012). Because data are so readily available in higher education, Taylor et al. (1991) suggest that the most basic reason why indicators are not yet in use on all campuses is simply that not all decision makers have identified which data are strategically important.

Purpose Statement

The purpose of this study was to create a set of strategic indicators that academic leaders at Assemblies of God colleges can use to determine the strategic position of their institutions. These indicators can be used by leaders at individual institutions to monitor trends over time, as well as to provide data that can be compared among Assemblies of God colleges as a peer group of institutions. This study used the Delphi method, an

iterative communication process designed to guide the judgment of a panel of experts towards consensus on a complex issue (Linstone & Turoff, 2002). This Delphi study was composed of three rounds of online questionnaires, in which panelists worked towards a consensus on how they rated the relevance of strategic indicators for use at Assemblies of God institutions. The final set of indicators was composed of those indicators that the panelists agreed were relevant to their institutions. Panelists used the questionnaires to rate the relevance of strategic indicators suggested by Taylor and Massy (1996). Other indicators were suggested by the researcher, and more were suggested by the panel.

Five of the 12 accredited Assemblies of God colleges participated in this study. These institutions were selected on the basis of their similarity in total enrollment and annual budget, as well as the presence of a graduate program. Purposeful sampling was used to create the panel of experts for this Delphi study. From each participating institution the president, chief academic officer, chief business officer, and one additional upper level administrator were invited to participate, as well as two veteran faculty members and two trustees.

Research Questions

The researcher used the knowledge and priorities of leaders at Assemblies of God colleges to create a set of indicators that inform on the strategic position of these institutions. The following questions guided the research:

1. What aspects of the institution (i.e., finance, student life, academics, etc.) are the most important to strategic positioning at Assemblies of God colleges?

2. What indicators are more frequently identified as relevant for reporting on these selected aspects of the institution?
3. Which of the indicators suggested by Taylor and Massy (1996) are useful to Assemblies of God colleges?
4. How readily can indicators identified in research questions 2 and 3 be compared across institutions?

Assumptions

The researcher assumed the following.

1. Strategy can occur in higher education and that leaders at institutions of higher education do think strategically (Birnbaum, 2004).
2. Participants, as academic leaders, have the knowledge and experience to identify useful strategic indicators.
3. Although indicators have been identified at public, private, and religiously affiliated colleges, indicators have never been investigated at Assemblies of God colleges, indicators are identifiable at Assemblies of God colleges just as they have been at other institutions.

Delimitations

The researcher established the following delimitations for this study.

1. No religiously affiliated colleges outside the Assemblies of God participated in this research.
2. The unit of analysis was limited to a number of participants at each participating college. These participants included administrators, professors,

and trustees. No students, alumni, staff, or denominational leaders were included.

3. Although 12 accredited institutions are endorsed by the Assemblies of God, only six were invited to participate in this research. These six institutions were selected by the researcher because of similarities they share in terms of enrollment, cost of tuition, and presence of a graduate program.

Limitations

The following limitations apply to this research.

1. The indicators identified result from the priorities and circumstances that are important to participants at this point in time. How far into the future these indicators will be usable is unknown.
2. Like any survey, participants in this research may tend to respond to questions according to how they feel the questions should be ideally answered, rather than according to actual perceptions or experience (Kvale & Brinkmann, 2009).
3. This research was conducted using the Delphi method. Mitroff and Turoff (1975) pointed out that the consensus reached in a Delphi study may come from a compromise in position rather than best judgment.
4. All participating institutions are endorsed by the Assemblies of God. Therefore, results will not be directly applicable to other religiously affiliated colleges.

5. The researcher produced a suite of indicators suitable to providing data that can be compared among Assemblies of God colleges. No comparison of data between Assemblies of God colleges and non-Assemblies of God colleges can occur.
6. The researcher was the only source of data collection. As a graduate of an Assemblies of God college and member of the Assemblies of God, biases likely exist for the researcher.

Definitions

Assemblies of God – The Assemblies of God is a Pentecostal fellowship of churches founded in 1914. There are currently more than 12,000 Assemblies of God churches in the United States with more than 3 million adherents. Denominational governance consists of a headquarters, or General Council, located in Springfield, Missouri and 61 District Councils nationwide (Assemblies of God, 2014).

Delphi Method – Linstone and Turoff (2002) described the Delphi method as an iterative research process to collect and distill the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback.

Full-time Equivalent (FTE) – This is a standard enrollment metric in higher education, referring to the number of full-time students or the equivalent. For example, two half-time students equal one FTE.

Financial Indicator – These indicators report on financial trends and circumstances in terms of income, reserves, expenditures, and debt (KPMG et al., 2010).

Indicator – For the purposes of this discussion, an indicator is any kind of metric used to synthesize data in order to report on trends or discover strengths or weaknesses at an institution of higher education (Martin & Sauvageot, 2011; McLaughlin & McLaughlin, 2007).

Mission – The mission is the purpose of the institution. Mission guides institutional decision makers regarding how resources will be used to accomplish their vision (Alfred, 2006; Morrill, 2007; KPMG et al., 2010).

Nonfinancial Indicator – These indicators report on any trends and circumstances which are not directly financial in nature. For example, nonfinancial indicators may report data on competition for students, demand for enrollment, selectivity, student retention, and student demographics (Lee, 2008; McLaughlin & McLaughlin, 2007; Morrill, 2007).

Participant – A participant is anyone providing data to a researcher conducting an academic study. The participants' experience and perceptions about the topic of the academic study are what the researcher intends to uncover (Creswell, 2013; Denzin & Lincoln, 2011). In the current study, participants are the members of a panel of experts from whom data are collected.

Religiously Affiliated – This term refers to a highly diversified sector of private higher education whose institutions have a religious purpose and presence in their articles of incorporation, bylaws, mission statements, histories, curricula, and personnel (Andringa, 2009). This designation covers a continuum from complete denominational ownership to dormant historical affiliations. Although the preponderance of these

institutions is Christian, the term *church affiliated* is not used because some, such as Jewish universities, are related to other religions. Moreover, some Christian colleges are nondenominational and therefore not linked to any particular church (p. 169).

Strategy – "For institutions of higher education, strategy is finding the paradigms that promote institutional aims and mission" (Taylor et al., 1991, p. 1). Strategy strives to create sustained value and competitive advantage by using the institution's unique mission to distinguishing itself in the higher education marketplace (Alfred, 2006).

Strategic Plan – A strategic plan is a formalized plan which activates the institution's mission, and has a holistic view of the institution in which all elements (such as finance, student life, and academics) are considered as they relate to the mission (Morrill, 2007; KPMG et al., 2010).

Strategic Position – Strategic position refers to an institution's current condition and trajectory in terms of: (a) the institution's capacity to advance its mission, and (b) how well the institution's activities and resource allocation advance its mission (Taylor et al., 1991; Taylor & Massy, 1996).

Significance

To date, no attempt has been made among the accredited Assemblies of God colleges to identify strategic indicators. The indicators identified in this study may be used by Assemblies of God institutions of higher education to determine and monitor their strategic position. This occurs as each institution compares its own current indicator data to that of previous years, and as data are compared with peer institutions within the Assemblies of God. Moreover, only a scant effort has been made to identify indicators

among religiously affiliated institutions outside the Assemblies of God. Hence, these same indicators may also be useful to many similar religiously affiliated institutions that are not part of the Assemblies of God.

Although religiously affiliated institutions, both within and outside the Assemblies of God, face the most challenging times in their history, there is great potential for them to secure a bright future. The number of people regularly attending Assemblies of God churches in the United States continues to grow annually (Assemblies of God, 2014), and Assemblies of God colleges continue to benefit from a steady stream of enrollment (AAGHE, 2012). These same trends have also been noticed in other denominations. The number of evangelical Christians in the United States continues to increase, and there is a steady student demand for distinctly Christian institutions (Andringa, 2009). In order for leaders of religiously affiliated institutions to take hold of their futures, they cannot remain with those colleges and universities that do not understand what is happening to them and become more concerned with survival than strategy. Rather, they must create bold but realistic strategic plans that are truly built around their missions, while assessing and reassessing their strategic positions. Therefore, the development of strategic indicators is invaluable to the future of religiously affiliated institutions of higher education.

The future of this nation's religiously affiliated colleges is of vital importance to the future of higher education. These institutions enrich the diversity of the colleges and universities from which students may choose (Zumeta, 2001a). As private institutions, religiously affiliated institutions offer a significant financial advantage to state

governments by reducing the number of students seeking education at public institutions, which are often struggling to cope with demand and budgetary constraints (Education Commission of the States, 1990). The results of this study serve to secure and increase the contribution that Assemblies of God colleges make to American higher education.

Summary

In the modern higher education environment, religiously affiliated institutions face difficult times. Small enrollments prevent taking advantage of economies of scale and lack of endowment results in almost 100% tuition dependence. Meanwhile, the more competitive public institutions benefit from governmental allocations to offer tuition rates that are far less costly. However, religiously affiliated institutions may secure a brighter future by strategically planning growth and change around their missions, and remaining aware of their strategic positions. These are the challenges and opportunities that Assemblies of God colleges face. Therefore, the researcher sought to identify strategic indicators useful to Assemblies of God colleges by providing data that inform on strategic position. One important aspect of indicators is that they are readily comparable between and among participating institutions.

The remainder of this dissertation is organized into four additional chapters. In Chapter II, the literature relevant to the study is reviewed. Chapter III presents a detailed description of the methodology used in the study. The results are presented in Chapter IV, and Chapter V includes a discussion of the findings and implications for further research and practice.

Chapter II

Literature Review

Religiously affiliated colleges in the United States, such as those institutions affiliated with the Assemblies of God, are navigating some of the most challenging situations in higher education. At these institutions, indicators reporting strategic position can serve as a powerful tool for academic leaders to guide their institutions to a more stable future. Taylor and Massy (1996) defined strategic position as an institution's current condition and trajectory in terms of the institution's capacity to advance its mission, and how well the institution's activities and resource allocation advance its mission.

The purpose of this study was to select strategic indicators that academic leaders at Assemblies of God colleges can use to determine the strategic position of their institutions. The resulting set of indicators can be used by leaders at individual institutions to monitor trends over time, as well as provide data that can be compared among Assemblies of God colleges as a peer group of institutions. I employed the Delphi method to guide an expert panel of administrators, faculty, and trustees from Assemblies of God colleges in the selection of strategic indicators. Three rounds of questionnaires guided panelists to a consensus regarding which strategic indicators were relevant to Assemblies of God institutions. Panelists rated the relevance of indicators suggested by the researcher, as well as the relevance of indicators the researcher selected from Taylor and Massy (1996). Panelists also had the opportunity to suggest their own indicators, whose relevance was then rated by the entire panel.

In this chapter I will review literature relevant to the selection of strategic indicators for use at Assemblies of God colleges. Contributing literature comes from the areas of strategy, total quality management, benchmarking, and the balanced scorecard. Special reference is given to the strategic indicator literature produced by the Association of Governing Boards, in that it explicitly links the use of indicators to strategy. The Composite Financial Index created by KPMG et al. (2010) is also reviewed, because it is generally accepted as the most useful comprehensive financial indicator. Finally, literature on the creation and use of indicators in a comparative group of institutions is also reviewed.

Strategy in Higher Education

One of the first descriptions of strategy in higher education was offered by Cope (1978), who borrowed heavily from the concept of strategy found in management literature. According to this definition, strategy refers to the institution's choice of goals and the deployment of resources to attain those goals. Thus, the institution's strategy becomes a pattern of objectives, goals, and plans or policies for achieving those goals stated in a way that defines what the institution is or is to become (p. 8).

It was George Keller that brought strategy to the forefront among leaders and researchers in higher education. In his book *Academic Strategy*, Keller (1983) stated that an institution's strategy is birthed by determining exactly what an institution will do in light of internal and external considerations. These considerations are to be analyzed within a framework composed of the following six elements: (a) traditions, values, and aspirations; (b) academic and financial strengths and weaknesses; (c) leadership abilities

and priorities; (d) threats and opportunities in the environment; (e) market preferences, perceptions, and directions; and (f) the competitive situation (p. 153-162).

Alfred (2006) defined higher educational strategy as "a systematic way of positioning an institution with stakeholders in its environment to create value that differentiates it from competitors and leads to a sustainable advantage" (p. 6). According to this conceptualization, the essence of strategy is to increase the institution's value and to find a competitive advantage in the higher education market, and this is accomplished by institutions that successfully distinguish themselves from their competitors (p. 7). Alfred's description of strategy implies four foundational questions about the future of the institution and its position in the market: (a) Who are the stakeholders? (b) What kind of value is created for these stakeholders? (c) Does the value created lead to advantage by differentiating the institution from its competitors? and (d) Is the advantage sustainable (p. 6)?

Common to all of these descriptions of strategy is the importance of institutional mission. An institution's mission is its purpose, or its stated reason for being. The mission guides institutional decision makers regarding how resources will be used to accomplish their vision (KPMG et al., 2010). Thus, it is the mission that is used to determine what the institution will do, what it is and will become. It is also in light of the mission that leaders identify the goals which guide planning, policy making, and resource deployment. Leaders can also build on the unique mission of their institution to make their college or university distinct among competitor institutions, which according to

Alfred's (2006) conceptualization of strategy will increase value and create a competitive advantage.

It is even more important at small colleges for strategy to be built around the unique mission of the institution and for the allocation of resources and activities to be focused on the mission. Clark (1970) was the first to describe institutional uniqueness as the cornerstone of success at small private colleges, such as Assemblies of God colleges. More recently, Stimpert (2004) described uniqueness as the lifeline of small private colleges. In the modern higher educational market, these colleges are at a potentially lethal disadvantage against public institutions that cost far less to attend (p. 44). In order to maintain their niche in the higher educational market, private colleges must adhere to their unique identities (p. 48). The institution's individual identity, built around a unique academic mission, distinguishes the institution as a choice among stakeholders such as potential students and donors (p. 45).

Strategy and data. In order for an institution to think and act strategically, its decision-making processes must be data driven (Haberaecker, 2004). The importance of using data to guide decisions is twofold. First, data provide the kind of self-knowledge that identifies meaningful decisions and allows them to be intelligently made (Morrill, 2007). This implies that data are used to determine if strategies are working and point to reasons why strategies may not be working (Dolence & Norris, 1994). Second, data are objective and therefore provide a perspective on how the institution is faring that is more reliable than reports based on anecdotal knowledge (Taylor et al., 1991).

Due to modern record keeping and reporting capabilities, institutions are able to provide their leaders with a virtually unlimited stream of data. Because leaders cannot examine all of an institution's data, most of which would not even be of strategic significance, indicators are a useful means by which data can be selected and reported (Sapp, 1994). In this regard, indicators are a very effective tool for compressing data into a select set of percentages, ratios, and indices, so that decision makers can focus their attention on high priorities (KPMG et al., 2010). Martin and Sauvageot (2011) offer a general description of indicators as shortcuts, abbreviations, or substitutes for an underlying reality. In their description, indicators provide a snapshot of how the institution is doing at a given time with regard to activities that are the most crucial to the institution's health and pursuit of its mission (p. 29). Because they are disjointed and one-dimensional, indicators typically require proper interpretation and professional judgment in order to be properly understood and used (Morrill, 2007).

Strategic position. Researchers and practitioners in higher education have developed various kinds of indicators for a variety of purposes. Strategic indicators are those which have a holistic perspective of the institution and report on its strategic position. An institution's strategic position refers to its current condition and trajectory in terms of: (a) the institution's capacity to advance its mission, and (b) how well the institution's activities and resource allocation advance its mission (Taylor et al., 1991). At the same time, strategic position also informs on the overall health of the institution and its ability to secure its future, which are both intimately tied to advancing institutional mission.

Themes in the Indicator Literature

Borden and Bottrill (1994) point out that there is no single body of literature on indicators in higher education. Rather, the contributing literature has emerged from several methodological sources that these authors categorized as outcomes assessment, resource allocation, and total quality management (p. 14). The influence of total quality management (TQM) on indicators in higher education is the most relevant to the present discussion for two reasons. First, TQM models represent the most referenced frameworks by which institutions create their own indicator systems that reflect their own goals (Borden & Bottrill, 1994; McLaughlin & McLaughlin, 2007; Ruben, 1999; 2004). Second, the TQM framework sometimes includes indicators that are of strategic importance to the institution, whereas institutional strategy and strategic position are not part of outcome assessment and resource allocation models of indicator systems.

Outcome assessment. The outcome assessment approach emerged as a direct result of pressure from federal and state governments on institutions and systems for evidence of accountability (Borden & Bottrill, 1994). The question that gave rise to this kind of indicator is whether or not institutions of higher education are worthy, in terms of their enrichment of students and contribution to society at large, of the tremendous governmental investment they receive and increasing tuition they demand from students (Zumeta, 2001b). As a result, the focus of these assessment methods is on the outputs and outcomes of colleges and universities, typically measuring achievement in research, degree completion rates, learning outcomes, and student satisfaction with their educational experience (Borden & Bottrill, 1994). During the 1980s and early 1990s, the

use of outcome indicators became common at the state level; the indicators were also used to guide budgeting for higher education in many state legislatures (Zumeta, 2001b). Examples of recent statewide assessment initiatives, which use outcome indicators to monitor and benchmark institutional performance in relation to state level higher educational goals, include the Texas Higher Education Coordinating Board (2000; 2012) and the Maryland Higher Education Commission (2009; 2012).

Resource allocation. The resource allocation perspective focuses on inputs, such as the amount of money, time, and human resources that are allocated to organizational units and endeavors. Efficiency is given the highest priority, as outputs and outcomes are to be maximized per unit of input (Borden & Bottril, 1994). This family of indicators reports first and foremost on issues of financial concern (p. 15). Chabotar (1989) offered a description of financial ratios, such as the debt-equity ratio, that are commonly used within the resource allocation framework in higher education. Additional ratio indicators that are often associated with resource allocation include students per faculty, staff per faculty, or expenditures per student (Borden & Bottril, 1994). This type of indicator was the first to be developed in higher education (Frances & Coldren, 1979) and is still widely used today (KPMG et al., 2010; McLaughlin & Mclaughlin, 2007). The use of resource allocation indicators guides budgeting and planning carried out by legislators, trustees, and administrators (Chabotar, 1989; McLaughlin & McLaughlin, 2007).

Total quality management indicators. The total quality management (TQM) school of thought, sometimes referred to as continual quality improvement (CQI), has its roots in the writings of management scholars Edwards Deming (1988) and Joseph Juran

(1989). TQM purports that a business builds value by ensuring quality and meeting customer expectations. In fact, customer satisfaction is the most valuable standard by which quality is judged. As Marchese (1997) pointed out, "quality is what the customer says it is" (p. 505). Although quality is defined by the customer, it is achieved as the company perfects internal processes, which are all focused on fulfilling the institutional mission of excellence in customer satisfaction (Borden & Bottril, 1994; Deming, 1988; Ewell, 1993; Seymour, 1992). Hence, TQM is process oriented and companywide in its implications, as it dissects each process of the organization into component parts and the interconnections among them (Marchese, 1997). The goal is to continually determine the processes that need to be improved in terms of efficiency and effectiveness (Borden & Bottril, 1994), as well as to reduce variation in output (Ewell, 1993).

The use of total quality management methods implies the creation of a comprehensive information system that reports on all processes within the organization. This information system includes the deployment of relatively simple statistical tools, such as charts, diagrams, checklists, and metrics (Marchese, 1997). Data are important in the TQM model for several reasons. First, systematic data are the most valuable guide to decision making (Heilpern & Nadler, 1992), offering a countermeasure to the bureaucrats' problem-chasing based on their own anecdotal knowledge (Marchese, 1997). Second, a continual stream of systematic data on the organization's vital processes can indicate whether or not continual improvement is occurring as well as give an early indication of where processes are breaking down (p. 507).

Interest in the use of TQM methods became commonplace on campuses in the 1990s (Birnbaum, 2000; El-Khawas, 1995; Ewell, 1993; Seymour, 1992). The TQM perspective has important implications for institutions that pertain to the development of indicators in higher education. The first implication is the conceptualization of the student as a customer, which emphasizes student expectations when quality is defined and measured (Birnbaum, 2000; Marchese, 1997; Ruben, 2004; Seymour, 1992). Second, TQM stresses the systematic use of institutional data to guide decisions and continually pursue quality (Marchese, 1997). Third, TQM shifts the focus of administrators towards processes, rather than towards outcomes, inputs, or individuals (Borden & Bottrill, 1994; Dolence & Norris, 1994; Seymour, 1992). Examples of administrative processes that are measured under TQM include cycle time in the financial aid office, responses to customer complaints, retention of transfer students, and time needed to deposit gifts (Seymour, 1993). Finally, the comprehensive perspective that TQM takes of the organization compels administrators to create standards and collect data pertaining to processes in every unit of the institution (Birnbaum, 2000; Marchese, 1997; Seymour, 1992).

The balanced scorecard. The balanced scorecard was developed by Kaplan and Norton (1996) as a TQM model for creating indicators. This method was built around translating institutional mission and vision into a set of tangible objectives and measures (p. 10). The use of four perspectives was designed to identify those processes that are critical for achieving breakthrough performance (p. 11). However, a company that is well practiced at using the balanced scorecard will use it to identify new processes that

will improve performance rather than improving on existing processes (p. 27). These authors also appreciated the importance of keeping an indicator system focused, suggesting that the scorecard be formed around select drivers of strategic objectives (p. 12).

The balanced scorecard provides a framework that is blended, or *balanced* in several ways. It creates a comprehensive suite of indicators built around a balance of four basic perspectives of the organization's performance. These four perspectives are: financial, customer, internal-business-process, and learning and growth (Kaplan & Norton, 1996). Also, these indicators are balanced in terms of the kinds of indicators used. A balanced scorecard includes outcome, or *lagging* indicators, as well as driver, or *leading* indicators (p. 32). A scorecard should also include a balance of short and long-term indicators of success (p. 34), as well as objective, easily quantified measures and subjective, somewhat judgmental appraisals of performance (p. 10).

Ruben (1999, 2004) offered a thorough description of how the balanced scorecard can be modified for use in higher education. Although the student is most often used as the customer in higher educational TQM models, Ruben (2004) explained that different groups of stakeholders on and off campus can be seen as the customer depending on the process under consideration. He offered 11 examples of stakeholders whose perspectives could be used as that of the TQM customer, this list includes employers, students, prospective students, trustees, and faculty (p. 103).

According to Ruben (2004), the four perspectives Kaplan and Norton (1996) described can be replaced by "indicator clusters" which each institution can create for

itself. A framework of indicator clusters that would work for most institutions comprises the following five clusters: teaching/learning; service/outreach; scholarship/research; workplace satisfaction; and administration and operations (p. 105). Indicator clusters are then used to evaluate excellence in relation to the following four concepts:

1. The quality of programs, services, and activities as judged by peers and professionals
2. The extent to which programs, services, and activities are perceived to meet the needs and expectations of their beneficiaries
3. The quality of the organizational climate, and the satisfaction of faculty and staff from their perspective as employees
4. The effectiveness and efficiency of operational and financial dimensions of the organization. (Ruben, 2004, p. 104)

For Ruben (2004), the indicators that the balanced scorecard would create for higher education are *excellence indicators*, whose function is to inform on the level of excellence associated with institutional activities. Building on the foregoing list of concepts, excellence indicators can be developed for any academic unit or institution, given clarity of mission, vision, and goals. Some excellence indicators are likely to include traditional measures that are already familiar, while others might be unique to the purposes and aspirations of the institution (p. 104).

Benchmarking. The concept of benchmarking was derived from TQM, and offers an effective means by which an institution can employ TQM methods to deal with specific problems. Although described and used in a variety of ways in higher education, true benchmarking is an action-based approach for obtaining information to improve performance (Qayoumi, 2004). According to Qayoumi (2004):

> It begins with the premise that an organization should be humble enough to admit that there can be others who are better in accomplishing a particular task, and that it makes good sense to learn from them rather than reinventing the wheel. (p. 149)

Benchmarking is designed to answer the following questions: "How are we doing compared to others? How good do we want to be? Who's doing the best? How do they do it? How can we adopt what they do to our institution?" (Rush, 1994, p. 84-85).

In a typical benchmarking study, a process is identified for improvement. A team is assigned to carefully map the process; the team gathers information on parallel processes at other organizations, identifies two or three best-in-class examples for further study, visits those other organizations, and then reassembles all that is learned in order to improve how the process is carried out in their own organization (Marchese, 1997). McLaughlin and McLaughlin (2007) described this as *process benchmarking*. The overarching goal of this kind of benchmarking is to get people to think creatively by getting them out of their immediate foxholes to see for themselves more effective ways of doing their work (Marchese, 1997). Therefore, the important innovation that benchmarking brought to the field of management is its focus on the comparison of process rather than metrics (Birnbaum, 2000). Indicators are useful in benchmarking, but only to identify the organizations that perform the best on a given measure (p. 81). Indicators are used again after managers have identified best practice and studied it in order to create quantitative benchmarks, which function as targets, for the practices and processes within their own organizations (Camp, 1989).

Birnbaum (2000) asserted that the preponderance of benchmarking done in higher education today is not truly benchmarking because it gives no consideration to process and makes no attempt to identify best practice. Rather, these so-called benchmarking programs simply combine data from all participating institutions (whether they are exemplary or not) in order for institutions to compare themselves to group averages. Therefore, most attempts to benchmark in higher education are simply creating indicators based on a target outcome derived from data provided by other institutions (p. 80). While comparing indicator data with an average from a comparative group can be informative within a system of strategic indicators (Taylor et al., 1991; Taylor & Massy, 1996), the misled use of benchmarking indicators described here does not inform on strategic position because the indicators are created within the framework of TQM rather than strategy.

The Baldrige program. Perhaps the most visible contribution of the TQM movement to the national scene is the The Malcom Baldrige National Quality Award Program. Named after the former Secretary of Commerce, this award program was established by Congress in 1987 with the stated mission of improving the competitiveness and performance of U.S. organizations (Baldrige Program for Excellence, 2014). The Baldrige framework for excellence was greatly influenced by the TQM model, with its focus on processes within and between the systems of an organization, satisfaction among beneficiaries of the organization's services, the importance of workplace culture, and a clear sense of organizational mission and vision (Ruben, 2004). One important aspect of the Baldrige framework of excellence is the

development of indicators of organizational performance that capture the organization's mission and goals, as well as facilitate comparison with peer and leading organizations (p. 157). The Baldrige program offers yearly awards for quality in six different sectors, one of which is education. The Baldrige criteria for quality have also inspired multiple state award programs in higher education, as well as the accreditation processes of the Middle States Commission and the North Central Association (Ruden, 2004).

Academic quality improvement program. In 1999 the Higher Learning Commission of the North Central Association launched the Academic Quality Improvement Program (AQIP) as an alternative process through which an already accredited institution can maintain accreditation (Higher Learning Commission, 2007). In the 2010-11 academic year the Higher Learning Commission ran a pilot program in which institutions can coordinate reaccreditation with their quality initiatives under state and federal quality programs, including the Baldrige Award. This pilot program will possibly be extended to all 19 states in which Higher Learning Commission institutions are located (Higher Learning Commission, 2012).

Borrowing from TQM, the AQIP concentrates on systems and processes both as the basis for quality assurance and as the lever enabling institutional improvement (AQIP, 2007). The AQIP standards for excellence in higher education consist of a framework of nine categories, each of which is designed to analyze one of nine systems that are common among institutions of higher education (p. 7). Thus, the AQIP provides a tool by which any institution can evaluate the systems it uses to do its work and achieve its outcomes. These categories ask collectively, "Are we doing the right things to achieve

our mission and goals?" and "Are we doing the things we do as well as we could" (p. 3)? The use of institutional data to answer these questions is an important part of the AQIP approach and the basis for the creation of institutional indicators which report on processes, results, and improvements within the nine categories (Higher Learning Commission, 2007). The nine categories are presented below:

1. Helping students learn
2. Accomplishing other distinctive goals
3. Understanding students' and other stakeholders' needs
4. Valuing people
5. Leading and communicating
6. Supporting institutional operations
7. Measuring effectiveness
8. Planning continuous improvement
9. Building collaborative relationships. (AQIP, 2007, p. 1)

Critical analysis of TQM indicators. The drawback to relying on process indicators in higher education is the difficulty of determining the value, if any, of a single process to the overall organizational scheme (Borden & Bottril, 1994). Hence, the link between TQM indicators and overall institutional performance or strategic position is difficult to demonstrate (Dooris & Teeter, 1994). Most process indicators fail to inform on issues of explicit strategic importance and focus instead on how efficiently and effectively individual units function in relation to institutional mission and customer (student) expectations (Birnbaum, 2000).

TQM indicator systems can be designed to include non-process indicators of strategic importance alongside their usual data from processes. For instance, the balanced scorecard is a TQM indicator model that can become more strategic as indicators are included which report on issues of strategic importance. However, the basic difficulty of using the balanced scorecard, Baldrige program, or any other TQM model to report on an institution's strategic position is that TQM is designed to improve *all* the processes of an institution. TQM systems can overwhelm data reporters with work and decision makers with more information than needed. The sheer number of indicators that a TQM approach is likely to produce for a single institution can camouflage those data that are strategically significant (Dolence & Norrise, 1994). Marchese (1997) and Birnbaum (2000) both observed that the comprehensive nature of the TQM approach makes it too cumbersome and time consuming for long-term use or widespread buy-in on the part of decision makers in higher education.

Sustained institution-wide adaptation of TQM requires large-scale organizational and cultural change, which is a leading cause for unsuccessful implementation of TQM methods (Glover, 1993; Matta et al., 1996; Sebastianelli & Tamimi, 2003). Writing from the perspective of the business world, Heilpern and Nadler (1992) admonished organizations to not employ TQM methods unless: (a) their current state is intolerable, (b) they are willing to make the needed changes over time, (c) they are willing to stick with TQM permanently, and (d) it is important to the success or survival of the organization. Birnbaum (2000) pointed out that relatively few institutions of higher education could meet the four criteria. However, TQM methods have been known to

serve institutions of higher education quite well when used to deal with specific problems, such as campus parking (Qayoumi, 2004) and meal contracts (Norman, Haley, & Haislar, 2004).

Another shortcoming of the use of TQM indicator systems for strategic purposes in higher education is its focus on the perspective of beneficiaries of institutional services in order to guide the selection of indicators (Deming, 1988; Ruben, 1999, 2004; Seymour, 1992). Recall that a basic tenet of TQM is that the company can build value and secure its future as quality improves and customer satisfaction increases (Deming, 1988; Juran, 1989). However, this does not necessarily hold true in the world of higher education. Diverse groups of stakeholders at any institution of higher education (McLaughlin & McLaughlin, 2007; Ruben, 1999; 2004) hold wants and aspirations that can guide the institution towards opposing destinations (Birnbaum, 2000; Marchese, 1997; Nicklin, 1995). Moreover, incorporating these multiple perspectives into a strategic indicator system may not result in an information-gathering tool that provides decision makers with the best information, presented in the best format, for the purpose of strategically informed decision making.

AGB Indicator Literature

The literature produced by the Association of Governing Boards of Universities and Colleges (AGB) on the subject of indicators in higher education is especially useful to this discussion. This literature includes two seminal works, *Strategic Analysis: Using Comparative Data to Understand Your Institution* (Taylor et al., 1991) and *Strategic Indicators for Higher Education* (Taylor & Massy, 1996). These works are important to

this research because their stated purpose is to describe an indicator framework for the most concise assessment of an institution's strategic position. The contribution of these works to the study of indicators in higher education is important for several reasons. First, they offer the reader strategic indicators from which to choose, although they do mention that institutions will likely want to create some of their own indicators in addition to the indicators described in the AGB literature (Taylor et al., 1991; Taylor & Massy, 1996). Each of these works uses data from a national survey to provide national averages for each indicator. Institutions that participated in the survey were categorized by type to create a generic reference group to which the readers can compare data from institutions to the national average of similar institutions.

Taylor et al. (1991) and Taylor and Massy (1996) were the first to explicitly link indicators to strategy in higher education. These authors posited that the best way to navigate institutions through the challenges of the modern higher education environment was to ensure their strategic focus. This means that all activities and resources are channeled toward the pursuit of the institutional mission; otherwise, the institution will be unable to curb random growth, control costs, and stem institutional drift (Taylor & Massy, 1996). A strategically-focused institution is committed to competency in core programs today and the attainment of institutional goals in the future (p. xi).

When indicator data are used within the framework of determining strategic position there are no *right* or *wrong* values (Taylor & Massy, 1996). When data are compared within a peer group, strategic indicators should be used to determine

institutional position relative to peers, to past performance, or to goals, and to understand the reasons for any discrepancies observed (p. xv).

The first AGB book on indicators, *Strategic Analysis: Using Comparative Data to Understand Your Institution* (Taylor et al., 1991) was designed to build on previous AGB works dealing with strategy and decision making by trustees. Taylor et al. (1991) provided an extensive database composed of comparative data on more than 50 strategic indicators for more than 500 institutions. The indicators were distributed among nine critical decision areas that were modified from previous AGB publications. The nine critical decision areas are presented in Table 1, along with the information reflected by indicators associated with each area and one example indicator from each area.

The database used by Taylor et al. (1991) allows comparison of single institutions with averages figured for each indicator within categories of institutions. For the purpose of comparison, the authors divided institutions into two main groups, public and private, which are then further divided. The structure of categories is displayed in Table 2.

A second work sponsored by the AGB, entitled *Strategic Indicators for Higher Education* (Taylor & Massy, 1996) used an expanded database that included more than 100 indicators from more than 1000 institutions (p. xii). One significant departure from the first text was the abandonment of the nine critical decision areas. Taylor and Massy (1996) described the institution of higher education as comprising four fundamental strategic assets: Financial capital, physical capital, information capital, and human capital (p. xiii). They described financial capital as an institution's economic resources,

Table 1

Critical Decision Areas and Example Indicators

Critical Decision Area	Indicator Information	Example Indicator
Students	Drawing Power Retention Diversity	Matriculation as a Percentage of Applicants
Faculty	Composition Diversity Tenure	Percentage of Faculty who are Hispanic
Instruction	Programs Instructional Expenditures	Instructional Expenditures per FTE Student
Research	Research Funding Sources of Support	Institutionally Funded Research as a Percentage of Total Research Expenditures
Plant	Condition of Plant	Deferred Maintenance as a Percentage of Total Replacement Value of Plant
Tuition	Tuition Financial Aid Tuition Financing	Institutional Student Aid as a Percentage of Tuition-and-Fee Revenue
Student Support	Level of Student Services	Students per FTE Student-Support Staff Member
Giving	Source of Gifts Size of Gifts	Percentage of Alumni who Contribute
Finances	Operating Performance Results Financial Structure Endowment Return Financial Flexibility	Percentage of Current Fund Revenue Derived From Tuition and Fees

Source: Taylor et al. (1991)

Table 2

Institutional Categories

Private Institutions	Public Institutions
Research and Doctoral	Research and Doctoral
Comprehensive and Liberal Arts	Comprehensive and Liberal Arts
Theological	Two-year
Other Specialized	Multi-campus with Hospital
Two-year	Multi-campus Without Hospital

Source: Taylor et al. (1991)

such as revenue, reserves, investments, and endowment (p. 2). Physical capital refers to buildings, land, and equipment (p. 76). Information capital consists of library and computer resources (p. 88). Finally, human capital is the intellectual wealth of the institution, as embodied in the students, faculty, and staff (p. 104). For these authors, the quality of the four strategic assets, and their interrelationships, is what drives the institution's strategic position (p. xiii). The 100 strategic indicators presented by Taylor and Massy (1996) each reported on various aspects of the four strategic assets.

Another important difference from the first AGB text on indicators is that Taylor and Massy (1996) suggested a list of *top ten indicators* which are typical of most institutions that develop strategic indicators. Despite the diversity of institutions, these ten indicators provided a short list of indicators that are especially revealing (p. xvii). However, not all of the top ten indicators are applicable to all institutions. For instance, an institution that practices open enrollment will not use an indicator such as *Percent of*

freshman applicants accepted. The four strategic assets and their associated top ten indicators are presented in Table 3.

It should be noted that one of the top ten indicators, namely *Revenue structure*, is in fact a collection of percentages reporting revenue by source, such as the amount of income gained from tuition payments, endowment, and contributions from alumni (p. 3). Similarly, the top ten indicator *Expenditure structure* is a set of percentages that inform on the percentage of total expenditures allocated toward specific activities, such as plant

Table 3

Strategic Assets and Associated Top Ten Indicators

Four Strategic Assets	Top Ten Indicators
Financial Capital	Revenue Structure;
	Expenditure Structure;
	Excess (Deficit) of Current Fund Revenues Over Current Fund Expenditures;
	Percent of Living Alumni who Have Given at Any Time During the Past Five Years
Physical Capital	Estimated Maintenance Backlog as a Percentage of Total Replacement Value of Plant
Information Capital	
Human Capital	Percent of Freshman Applicants Accepted and Percent of Accepted Freshman who Matriculate;
	Ratio of FTE Students to FTE Faculty;
	Institutional Scholarship and Fellowship Expenditures as a Percentage of Total Tuition and Fee Income;
	Tenure Status of FTE Faculty;
	Percent of FTE Employees who are Faculty

Source: Taylor and Massy (1996)

operations, student services, and scholarships (p. 23). Also, the top ten indicator *Excess (deficit) of current fund revenues over current fund expenditures* is a ratio that serves the same basic purpose as the primary reserve ratio of the Composite Financial Index described below (see page 40). The strategic asset *Information capital* is not associated with any of the top ten indicators. However, the authors maintained that it is one of the four core assets of an institution, representing investment in the production of knowledge, although it does not have any indicators that typically emerge as one of the main indicators used by institutions (p. 88).

Taylor and Massy (1996) categorized institutions for comparison by dividing them into two groups, public and private, and these two groups were each divided into three subgroups. Once again, for the sake of comparison, data from each category of institution were averaged for each indicator. The most important difference between this classification system and that of Taylor et al. (1991) is that here the public and private groups of institutions were each divided into three subgroups, rather than five. This is due to the fact that the presence of a hospital was not used by Taylor and Massy (1996) as a criterion for the categorization of public universities, and private institutions were simply divided into three subgroups based solely on the amount of tuition they charge. The categories for referent groups designed by Taylor and Massy (1996, p. 177) are presented in Table 4.

Table 4

Institutional Categories

Private Institutions	Public Institutions
Tuition Under $9,000	Two-year Colleges
Tuition $9,000-$12,000	Regional Colleges and Universities
Tuition Over $12,000	Research and Land-Grant Universities

Source: Taylor and Massy (1996)

The Composite Financial Index

A system of strategic indicators is not complete unless some of those indicators inform on the financial situation of the institution. Financial indicators were among the first to be used in higher education (Frances & Coldren, 1979; Mintor et al., 1980) and a widely used type of indicator today. However, financial indicators are still not conceptualized within a strategic framework at most institutions and rarely designed to reflect long-term performance. One example of this is the Composite Score (CS), which is a financial indicator that is universal among private colleges and universities. The CS was developed by the United States Department of Education (USDE). These scores are produced from audited reports that private institutions of higher education are required to file annually with the USDE. The CS serves the purpose of determining stewardship among institutions which benefit from federal student aid and whether or not these institutions are currently meeting their financial obligations (USDE, 2012). KPMG et al. (2010) also pointed out that because the CS was developed to determine the relative risk

each institution presents to Title IV programs the time horizon for its ratio analysis is necessarily short-term.

Editions of *Ratio Analysis in Higher Education* (KPMG et al., 2010) first appeared in the 1970s. This volume explicitly linked financial indicators to institutional strategy and described the use of the Composite Financial Index (CFI). The CFI is expressed as a ratio that reflects an institution's overall financial situation. Although the CFI inspired the development of the CS, the CFI is strategic in nature and is designed with the long-term financial situation in mind rather than the short-term focus of the CS. The CFI is widely regarded as the most useful financial indicator in higher education because it is relatively easy to understand (Hudack, Orsini, & Snow, 2003) and provides the best standardized snapshot of an institution's financial situation (Lee, 2008; Townsley, 2009). Hudack et al. (2003) pointed out that, like any indicator, the interpretation of the CFI requires a degree of professional understanding of the unique context of the individual institution.

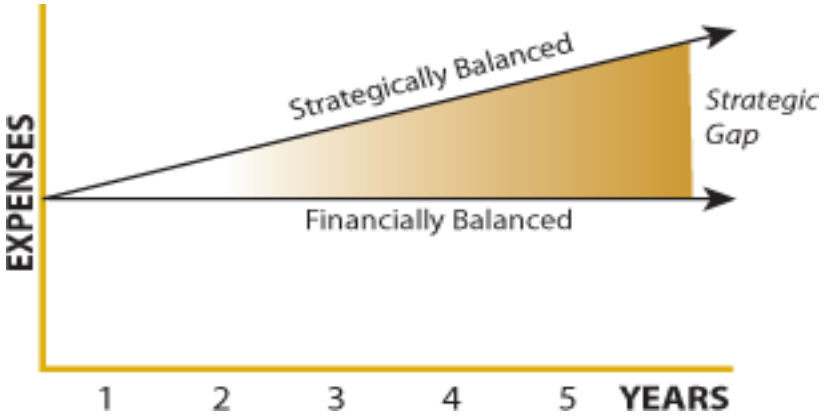
The description of ratios and calculations in the fourth edition of *Ratio Analysis in Higher Education* (KPMG et al., 1999) is the edition that is the most pertinent to the present discussion because it is the only edition that deals specifically with private institutions. In this edition the authors presented the CFI for private institutions, which differs from that of public institutions because of the different accounting norms and regulations applied to the private sector. Moreover, in the seventh edition (KPMG et al., 2010), the authors noted that the methods and standards for the CFI that they presented in the fourth edition have worked well in the private sector and do not require modification.

The purpose of the CFI is to quantify the status, sources, and uses of resources as well as the institution's ability to repay current and future debt. More importantly, the CFI and its supporting ratios are designed to gauge institutional performance and focus planning activities on those steps necessary to improve the institution's financial profile in relation to its mission (KPMG et al., 1999). Institutions which remain focused on mission, deploying resources to achieve mission-guided results, will be the ones best positioned to achieve long-term success (p. 7). Moreover, finances do not determine the mission or strategic plan. Rather, finances enable or inhibit the strategic plan (p. 2).

Strategy and finance. The activity of balancing the budget most often focuses on an accounting balance without necessarily focusing on whether the budget is strategically balanced (KPMG et al., 1999). If the strategic plan calls for substantive change, and budgeting is done incrementally, then the budget is not strategically balanced. An institution's health may look great on a spreadsheet, but where is it headed in relation to its mission? Are resources used strategically, and reinvested in the institution in order to secure its future? Or, is budgeting done incrementally? Townsley (2009) described incremental budgeting as the process by which small decisions follow the path of least resistance, slowly nudging the institution toward some undefined future point. The result of incrementalism is insignificant and uncoordinated growth (p. 171).

Where the budget is not strategically balanced, a strategic gap exists in balancing the budget. This strategic gap means that strategic objectives run the risk of never being met (KPMG et al., 1999). Moreover, the strategic gap represents a kind of deferred obligation that the institution will have to make up later (p. 88). Two lines which define

a strategic gap are presented in Figure 1. The top line represents the spending of an institution that reinvests in itself at a rate sufficient to meet the objectives of its strategic plan. If repeatable revenues meet or exceed this line the budget is said to be strategically balanced. The second line represents the expenses of an institution who's budgeting *gets the job done*, meaning that budgeting maintains the status quo but there is little reinvestment in strategic initiatives. If repeatable revenues meet or exceed this line, the budget is financially balanced. As displayed in Figure I, the strategic gap refers to the distance between the two lines and is cumulative over time.



Source: KPMG et al. (2010, p. 65)

Figure 1. Strategic gap.

What makes the CFI such a useful indicator is that it effectively compresses a vast amount of financial data into a handful of ratios that are readily understood. In fact, the CFI was fashioned on the premise that only a few well-constructed measures, such as the CFI and its supporting ratios, are needed to effectively provide insight to financial health

and how strategically the budget is managed (KPMG et al., 1999). The CFI is calculated using the following four ratios.

The primary reserve ratio. This ratio reports on the financial strength of the institution by comparing net assets to total expenses (KPMG et al., 1999). Trend analysis of this ratio indicates whether the institution has increased in net worth in proportion to the rate of growth in operational size (p. 12). This ratio also demonstrates how long an institution could continue to meet its monthly expenses without receiving any revenue. For example, a Primary Reserve Ratio of .40 means that the expendable net asset balance could cover total expenses for about 5 months (40% of 12 months). A ratio of .10 indicates that the expendable net asset balance is such that borrowing is regularly required to meet general operating expenses.

The Primary Reserve Ratio is figured as follows:

$$\frac{\text{Expendable Net Assets}}{\text{Total Expenses}}$$

The denominator reflects the total yearly expenditures. The numerator, Expendable Net Assets, can be calculated using the following algebraic equation:

$$\text{Expendable Net Assets} = \text{Total Net Assets} - \text{Permanently Restricted Net Assets} - (\text{Property, Plant, and Equipment} - \text{Long-term Debt})$$

The net income ratio. This ratio indicates whether or not the institution is living within its means (KPMG et al., 1999). In other words, this ratio informs on whether or not total unrestricted activities resulted in a surplus or a deficit. This ratio is a primary

indicator, explaining how a large surplus or deficit in unrestricted funds affects behavior in the other three ratios (p. 15). The authors offered two methods of figuring the Net Income Ratio. The method presented below is best for the current study, in that the other method assumes that institutions are already figuring an operating indicator.

The Net Income Ratio can be figured in the following manner:

$$\frac{\text{Change in Unrestricted Net Assets}}{\text{Total Unrestricted Income}}$$

The return on net assets ratio. This ratio uses total economic return to determine if the institution is better off today than in previous years (KPMG et al., 1999). A decline in this ratio may be warranted if it reflects a strategy to better fulfill institutional mission. However, an improving trend in this ratio indicates that the institution is increasing net assets and will likely be able to set aside financial resources to enhance flexibility or reinvest in itself (p. 18).

The Return on Net Assets Ratio is calculated as follows:

$$\frac{\text{Change in Total Net Assets}}{\text{Total Net Assets}}$$

Because the Return on Net Assets Ratio is greatly affected by external forces, such as inflation, the authors suggested that this ratio should be compared to nominal rate of return. This nominal rate of return can be figured as a 3 to 4 % real return target plus the Higher Education Price Index (KPMG et al., 1999). For instance, a period of low

inflation would suggest a target rate of return on assets of approximately 6 % to insure reasonable growth of resources (3 to 4 % real return target plus 2 to 3 % inflation).

The viability ratio. This ratio measures the availability of expendable net assets to cover debt should the institution have to settle its obligations as of the balance sheet date (KPMG et al., 1999). Thus, the Viability Ratio offers a measure of the overall debt burden of the institution and the flexibility it has to leverage more debt if needed (p. 21). The formula for this ratio is presented below. The denominator is defined as the total of amounts borrowed from third parties for long-term purposes. Note that the numerator is the same as the numerator for the Primary Reserve Ratio.

$$\frac{\text{Expendable Net Assets}}{\text{Long-Term Debt}}$$

Figuring the CFI. The foregoing ratios are used to figure the CFI. These four core ratios are converted into strength factors, which are multiplied by weighting factors, and the resulting four numbers are totaled to reach the single CFI score. In order to convert a ratio into a strength factor, the ratio is divided by a number that is equal to a score of one on the scale of strength. Table 5 presents the scores by which each ratio is divided in order to produce a strength factor (KPMG et al., 1999, p. 26).

Next, the strength factor for each ratio is multiplied by a weighting factor, represented as a percentage. The four products are added to produce the CFI. Weighting factors are assigned to strength factors according to Table 6 (KPMG et al., 1999, p. 28).

Table 5

Scale for Converting Core Ratios to Strength Factors

Ratio	Divider
Primary Reserve Ratio	.133
Net Income Ratio	1.3
Return on Net Assets Ratio	2
Viability Ratio	.417

Source: KPMG et al. (1999)

Table 6

Strength Factors and Corresponding Weighting Factors

Strength Factor	Weighting Factor
Primary Reserve	35%
Net Income	10%
Return on Net Assets	20%
Viability	35%

Source: KPMG et al. (1999)

Table 7 provides an example of how to combine the four ratios into a CFI score (reproduced from KPMG et al., 1999, p. 28).

Table 7

Calculation of the Composite Financial Index

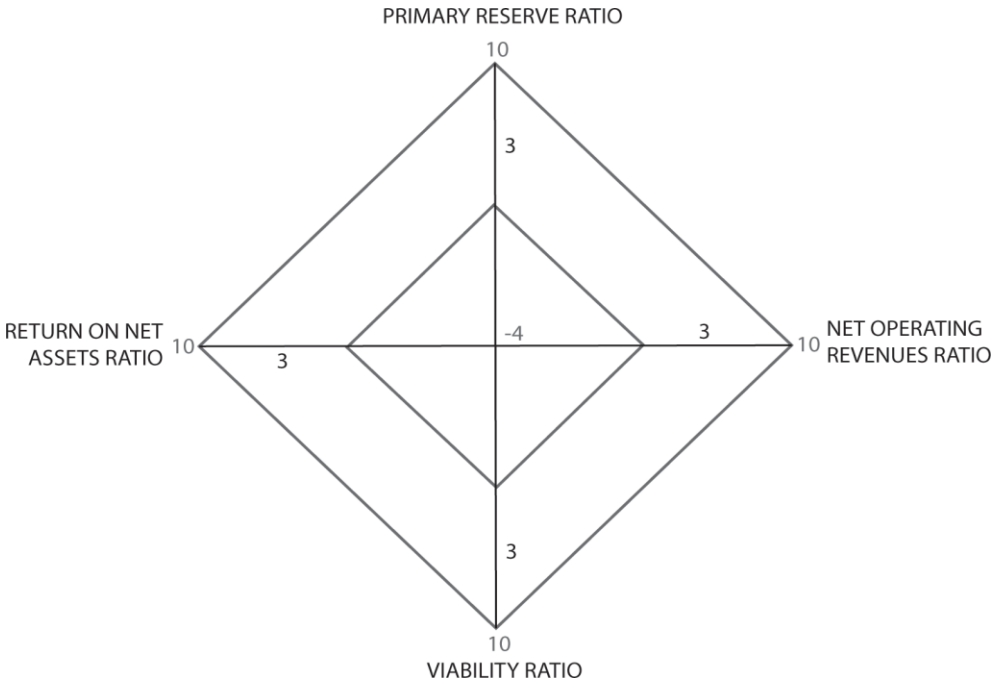
	Strength Factor	Weighting Factor	Score
Primary Reserve	5.56	35%	1.95
Net Income	3.26	10%	.33
Return on Net Assets	2.39	20%	.48
Viability	3.07	35%	1.07
	Composite Financial Index	3.8	

Source: KPMG et al. (1999)

Use of the CFI offers several advantages to decision makers at academic institutions. First, because it is a composite, it allows weakness in one of the four core areas to be compensated by strength in the others. Also, it provides a relatively easy way for leaders to have at least a rough measure of the institution's overall financial health. Moreover, the CFI lends itself for comparison among institutions and between fiscal years at the same institution (KPMG et al., 1999). The CFI for any fiscal year should be compared with CFI results from at least the last three years (p. 29). Comparing data from more than one year gives a more accurate picture of financial health, and is an important means by which trends can be identified. Multi-year data can also help determine if returns were earned on investments and if the right investments were made.

The graphic representation of the CFI. The CFI, and its four supporting ratios, are easily converted into a graphic representation, which makes data more readily understandable. This graphic presentation maps each ratio's value on a diamond,

showing the value of each ratio on an evenly weighted ratio axis. The Primary Reserve Ratio correlates to the Viability Ratio, just as there is a correlation between the Return on Net Assets Ratio and the Net Income Ratio. Therefore, these ratios have been placed opposite of each other on the axes of the CFI graphic (KPMG et al. 1999). Notice that the shaded area defined by the four ratios forms a diamond shape that illustrates the "shape" of the institution's financial health (p. 29). The shape of the diamond also informs if there is a weakness in one ratio that is offset by strength in the other ratios.



Source: KPMG et al. (1999, p. 29)

Figure 2. Graphic representation of the CFI.

Decision makers at each institution should determine their own thresholds for classifying a ratio, strength factor, or the CFI, as healthy or not (KPMG et al., 1999).

These authors did suggest, however, that a value of three is desirable for the CFI as well as strength factors in each of the four core areas. These indicators become stronger as their value increases to ten. In the seventh edition, they specifically noted that a CFI of greater than three most easily allows the institution to redirect resources towards transformation (KPMG et al., 2010).

The use of additional financial indicators. In their writings, KPMG et al. (1999, 2010) explained that decision makers often benefit from the use of other financial ratios outside those that are figured for the purpose of calculating the CFI. It is up to academic leaders to determine which, if any, additional financial indicators are useful for their particular institution, given its mission, size, sources of revenue, and challenges. These additional financial indicators would provide precise data dealing with specific questions that are deemed important by decision makers, rather than contributing towards an overall assessment of the financial health of the whole institution (KPMG et al., 2010). The fourth edition offers a long list of possible financial ratios which may benefit a private institution (KPMG et al., 1999). This list includes ratios which report on tuition dependence, plant maintenance, debt, and return on specific investments (p. 8).

Creating an Indicator System

The first step in creating a system of indicators is to identify for whom the data are being collected (Martin & Sauvageot, 2011). This will guide the process of selecting indicators towards those indicators that answer the questions being asked by those who will use them. In some cases, such as public institutions, indicators are created in order to report data to stakeholders off campus, such as state legislatures. In the context of this

study, indicators are designed to report on financial stewardship on the part of administrators, student outcomes, and economic benefits to the local economy. Government agencies use these indicator data to determine institutions that reflect effective stewardship of public funds, a practice that has been termed *performance funding* (Birnbaum, 2004). However, when indicators are developed for planning or strategic purposes, as in this study, they are designed for use by institutional decision makers. Therefore, these decision makers should have a role in the selection of indicators and determining how indicator data will be used.

Even when indicators are developed for strategic purposes they can still be used by decision makers in a variety of ways. Strategic indicators that are designed to monitor against mission drift will provide data that are compared over time within the same institution, as noted in the CFI literature (KPMG et al., 1999; 2010) as well as the AGB literature (Taylor et al., 1991; Taylor & Massy, 1996) reviewed above.

Indicators that are designed to report on an institution's strategic position must be compared to data on the same indicators at peer institutions (Taylor et al., 1991; Taylor & Massy, 1996). Therefore, where indicators are designed to be strategic, the institution should also create some kind of peer group for comparison. The goal of this comparison is not to determine which institution performs better on a given metric. Strategic indicators are designed to give a general indication of where the institution stands in terms of outcomes that are deemed to be of strategic importance, and therefore inform on strategic position (Taylor & Massy, 1996). Hence, the use of peer comparison is simply to give decision makers an idea of how their institution is faring in relation to similar

institutions. For this kind of comparison the peer group data can simply be averaged and individual institutions can compare their own data to the group average, as done by Taylor et al. (1991) and Taylor and Massy (1996).

Creating a comparative group. Teeter and Brinkman (2003) identified four main types of comparative groups: Peer groups, aspiration groups, competitor groups, and predetermined groups. Peer groups are created in order to give an institution a set of similar institutions to which it can be compared. These groups are created on the basis of characteristics that decision makers believe are the most important, such as size, programs, and mission (Weeks, Puckett, & Daron, 2000). Peer groups have received the most attention by researchers because they require the most work to create, since the criteria by which the most similar institutions are recognized must first be created and the relative importance of each criterion quantified (Teeter & Brinkman, 2003). Competitor groups emerge as an institution compares its own data to that of an institution or institutions with which it competes for students, funding, or faculty. Just because institutions are locked in competition does not mean they are similar in size, scope, or mission. However, this may not be important depending on what is being compared, and if the nature of the competition is such that simply monitoring one institution's competitive position against the others is important to the future of the institution (p. 105).

The concepts of aspiration and predetermined comparative groups are more important to the present study. Predetermined groups are those that are already associated with each other because of their shared history or participation in a visible

group (Teeter & Brinkman, 2003). One example of a predetermined comparative group is the Big 10, in which member universities participate in cooperative data sharing and benchmarking (Secor, 2002). Public institutions are often compared in predetermined groups according to geographical location or legal jurisdiction, as government agencies are interested in comparisons among institutions under their jurisdiction (McLaughlin & McLaughlin, 2007). The most common problem for predetermined comparative groups is that the participating institutions may or may not be inherently comparable, but they are seen as comparable simply because they are recognized as being in the same group (Teeter & Brinkman, 2003). Even institutions which vary in size, programs, and mission can still be used to create a usable comparative group, it is the nature of what is being compared that is critical (p. 106).

An aspiration group is comprised of institutions that are superior to the institution creating the comparative group (Teeter & Brinkman, 2003). The goal of the aspiration group is to create of set of peers that represent what the home institution wants to become in the future (McLaughlin & McLaughlin, 2007). Creating such a group establishes a specific context and rational means for setting goals, objectives, and strategic planning (p. 78).

The 12 accredited Assemblies of God colleges form a predetermined comparative group, in that they are already associated together because of their affiliation with the same denomination. However, these institutions are readily comparable peer institutions because of their similar size, income structures, program offerings, religious mission, and programs of study. At the same time, the proposed comparative group may serve as an

aspiration group for a few Assemblies of God institutions. These would be institutions that are in the process of developing along the same lines as other Assemblies of God colleges that are slightly larger, more financially stable, and offer more programs.

Attributes of an indicator system. Morrill (2007) suggested that the heart of any institution's indicator system is to provide data that enable strategies to be productive and assessment to be effective. Indicators should present data in a way that conveys the institution's evolving position in the world, rather than simply presenting a list of operational details. In order to fulfill their role in decision making, indicators must be chosen for their ability to reflect the institution's identity and strategic position. Morrill pointed out that indicators are often created using a framework that is designed to include all of the key areas of the institution. Examples include the nine critical decision areas of Taylor et al. (1991) and the four strategic assets described in Taylor and Massy (1996), both described above.

Banta and Borden (1994) described the attributes that indicators should possess. The first attribute is a clear sense of purpose that defines how the indicator will be used. Ultimately, indicators are the most effective when they operationalize institutional mission and goals, and are developed to monitor progress towards their achievement (p. 98). Although it sounds simple to say that indicators must have a clear purpose, Banta and Borden observed that clear purpose may be the most difficult of their standards for an indicator to achieve. They also observed that the remaining attributes of an indicator system more readily fall into place if the purpose of the indicator has been clearly defined.

Another attribute of an indicator is that it must be aligned with other indicators throughout the organization (Banta & Borden, 1994). Within an institution each college, department, or unit should have a set of goals that contribute to the institutional mission. Although such unity is rare at large institutions, it is more common at small colleges (p.98). What these authors do not specify is how this alignment should occur. Are indicators created such that they are aligned throughout the institution? Or, are indicators created and then the goals, aspirations, and assumptions across the institution brought into alignment with the institutional mission? In cases where such alignment is achieved, both methods may have been employed. Morrill (2007) pointed out that indicators can actually help communicate the institutional mission by making it more understandable in concrete terms and providing a common language for success.

In a manner analogous to an indicator being aligned with the goals and indicators used at different levels within the same institution, the meaning and significance of an indicator should be aligned among member institutions in a comparative group. While each individual institution has its own goals, the meaning of an indicator must be shared among participating institutions if they are going to correctly interpret indicator data produced by the group (Taylor & Massy, 1996).

Banta and Borden (1994) suggested that institutions use different indicators which inform on inputs, processes, and outcomes. Examples of inputs are resources such as library size, percentage of faculty with doctorates, and ability levels of incoming students. These kinds of inputs were especially popular in the 1970s (Richards & Minkel, 1986). The 1980s saw an increase in the measurement of outcomes, such as

student achievement and alumni satisfaction (Banta & Borden, 1994). However, measuring outcomes alone will not result in improvement. Processes have to be examined in order to find out how to improve outcomes (Dooris & Teeter, 1994), as explained in the discussion on benchmarking above.

Finally, institutions should limit the number of indicators they use. Decision makers are limited in the amount of time they have to keep up with data, and too much data can actually cloud understanding of what is really happening (Birnbaum, 2004; McLaughlin & McLaughlin, 2007) as well as overburden those who collect and report the data (Sapp, 1994). How many indicators are too many? Morrill (2007) suggested no more than 50 indicators, but senior administrators may regularly review twice that many. Morrill also suggested that trustees should be given a dashboard of indicators that does not exceed 30 indicators. A dashboard is a select set of indicators that represent a concise and general report on the institution (McLaughlin & McLaughlin, 2007). At the same time, Ruben (2004) warned that a preoccupation with too few indicators encourages them to be spun in a way that makes the institution look good.

The selection of indicators. The starting place for identifying indicators is the institutional mission. The indicators are a means by which the institutional mission is operationalized and applied to the critical activities of the institution (McLaughlin & McLaughlin, 2007; Morrill, 2007; Ruben, 2004; Sapp, 1994, Taylor et al., 1991). The choice of indicators must focus on mission-critical areas most likely to affect the long-term success of the institution (Taylor & Massy, 1996). These critical areas will not be the same for all institutions, but will vary by size, control, history, goals, and mission (p.

xii). Despite the diversity of institutions and their missions, most colleges and universities tend to develop similar indicator systems (Birnbaum, 2004; Ruben, 2004) selecting indicators to report on areas such as finance, staffing, student programs, and advancement (McLaughlin & McLaughlin, 2007). As a result, some indicators are practically universal while others are unique to the context of the individual institution (Ruben, 2004). The relative importance associated with individual indicators will also vary with mission and institution type (p. 103).

Inspired by the four perspectives of the balanced scorecard, Ruben (2004) suggested four concepts of departmental or institutional excellence by which the selection of specific indicators can be facilitated. Building on these basic concepts, along with clarity of mission, vision, and goals, indicators can be developed for any institution. The four concepts were explained as follows:

1. The quality of programs, services, and activities as judged by peers and professionals
2. The extent to which programs, services, and activities are perceived to meet the needs of and expectations of their beneficiaries
3. The quality of the organizational climate, and the satisfaction of faculty and staff from their perspective as employees
4. The effectiveness and efficiency of operational and financial dimensions of the organization. (Ruben, 2004, p. 104)

Baker (2002, cited in McLaughlin & McLaughlin, 2007, p. 56-57) described four basic principles for guiding the development of indicators: partnership, empowerment, integration, and teamwork. First, the identification of indicators should be based on the partnership of stakeholders, in that each set of stakeholders (students, faculty, alumni, etc.) offers their own perspective on what constitutes success for the institution. Second,

the identification of indicators should depend, in part, on determining those indicators which empower stakeholders to know what is going on. Third, indicators should be selected on their ability to integrate performance improvement into the process of monitoring institutional functions. For instance, indicators should report on both processes and outcomes, in that it is the processes which add value to the institution's activities. Finally, teamwork is the most important ingredient to the selection of indicators. The team, or teams, that identify indicators are most effective when they are comprised of experts from different parts of the institution, and when their authority stems from their knowledge and experience rather than managerial decree.

Banta and Borden (1994) offered advice on how the process of developing indicators can help ensure their use by decision makers once they have been developed. These authors observed that the team of experts who identify an institution's indicators should include those individuals who ought to use them once they have been identified. In their observation, academic leaders are much more interested in data if they helped determine what the indicators will be and how data will be collected (p. 103).

In their discussion on how to develop a set of institutional indicators, Dolence and Norris (1994) explained that indicators are produced through a *brainstorming session* by a strategic planning steering group. These groups may often prefer to begin with establishing broad categories of indicators, such as quality, resources, satisfaction, efficiency, and effectiveness in order to come up with specific indicators within each category. Their brainstorming will ultimately answer the question, "What are the

measures that our stakeholders and managers should look at to determine whether we are being successful" (p. 66).

Sapp (1994) offered specific questions for senior administrators to ask themselves when determining which indicators to use. The reader will notice the inductive nature of these questions, as they move from general functions to specific data that report on those functions. Sapp's five questions for senior administrators were as follows:

1. Which functions reporting to them are the highest priority and the most critical to the success of the institution?
2. Are there any functions that have produced "surprises" in the past and should therefore be included as well?
3. What measures (i.e., volume, accuracy, efficiency, timeliness, satisfaction) are the most important for determining how well each of these functions is performing?
4. How should these measures be quantified (i.e., ratio, headcount, year-to-date) in order to best evaluate performance?
5. Are data readily available to quantify these measures? (p. 2-3)

Researchers who function on behalf of an institution cannot create indicators by themselves; rather they facilitate the efforts of decision-making groups within the institution (Banta & Borden, 1994). Banta and Border stressed that there is no best method for an institution or department to articulate its purpose, goals, processes, and outcomes. Therefore, the researcher must be able to coordinate several different methods these groups may use to determine which indicators to use (p. 100). The researcher's role in this process is that of an information broker who has sufficient knowledge of the issues confronting decision-making groups, the decision-making processes within the institution, and access to appropriate information (Borden & Delaney, 1989). Ultimately,

the choice of indicators derives in a coordinated fashion from the experience of individuals throughout the institution (Banta & Borden, 1994).

Summary

This chapter reviewed literature from TQM that contributes to the understanding of indicators in higher education. TQM models such as the balanced scorecard, benchmarking, and the Baldrige criteria have been adopted for use in higher education. However, the model of strategic indicators developed by Taylor et al. (1991) and Taylor and Massy (1996), as well as the CFI literature by KPMG et al. (1999, 2010), are much more strategically focused and useful to this study. Literature regarding the creation and use of indicators and comparative groups was also reviewed, as this body of knowledge guides the research portion of this dissertation. This literature underlined the importance of teamwork and communication among expert academic leaders as key ingredients to the development of an effective indicator system. Furthermore, this literature suggested that indicator systems are much more likely to be used by academic leaders when these same leaders selected the indicators that the system includes.

Given the importance of effective communication among experts in order to identify indicators, the Delphi method provides an appropriate framework for this research project. Also, the experts that make up the Delphi panel will be the same leaders who will have the opportunity to employ the final set of indicators created by the panel, thereby increasing the likelihood that the indicators will be used at Assemblies of God colleges. In Chapter III the researcher will explain how the Delphi method works, how it has contributed to research in higher education, and how it will be used in this study to

identify strategic indicators. Chapter III also describes how participating Assemblies of God institutions were selected, as well as how experts at these institutions were identified for participation in the Delphi panel.

Chapter III

Methodology

This chapter addresses the purpose statement, research questions, survey research design, the Delphi method, sampling frame, instrumentation, and procedures for data collection and analysis. The Delphi method is designed to guide communication between members of an expert panel in order to create a consensus. It is this consensus among panelists that determines the results of a Delphi study. Two critical factors in every Delphi study are the definition of consensus that will be used and the standards by which individuals are recognized as experts and therefore invited to the panel. Chapter III defines consensus for the sake of rating indicators in the present research, the selection process for identifying participating institutions, and the selection of individual participants at these institutions.

Purpose

The purpose of this study was to select strategic indicators that academic leaders at Assemblies of God colleges can use to determine the strategic position of their institutions. The resulting set of indicators can be used by leaders at individual institutions to monitor trends over time, as well as provide data that can be compared among Assemblies of God colleges as a peer group of institutions. This study employed the Delphi method to guide an expert panel of administrators, faculty, and trustees from Assemblies of God colleges in the selection of strategic indicators. Three rounds of questionnaires were used to guide panelists to a consensus regarding the selection of strategic indicators relevant to Assemblies of God institutions. Panelists rated the

relevance of indicators suggested by Taylor and Massy (1996). Panelists also suggested their own indicators, whose relevance was then rated by the entire panel.

Research questions. The following research questions guided this study in the selection of strategic indicators for Assemblies of God colleges.

1. What aspects of the institution (i.e., finance, student life, academics, etc.) are the most important to strategic position at Assemblies of God colleges?
2. What are the best indicators for reporting on the selected aspects of the institution?
3. Which of the strategic indicators suggested by Taylor and Massy (1996) are useful at Assemblies of God colleges?
4. How readily can the indicators identified in research questions 2 and 3 be compared across institutions?

Research Design and Methodology

Linstone and Turoff (2002) described the Delphi technique "as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem" (p. 3). This occurs through a series of questionnaires, or rounds, which are used to collect data until consensus is reached among panel members (Hsu & Sandford, 2007; Keeney, Hasson, & McKenna, 2006). Each round provided data that are used by the researcher to prepare questionnaire items for the subsequent round, as well as provided controlled feedback to panelists (Day & Bobeva, 2005; Franklin & Hart, 2007; Keeney et al., 2006). The Delphi method is generally considered a mixed method research design (Franklin & Hart, 2007),

although the contribution of qualitative data is limited in most cases and sometimes nonexistent (Day & Bobeva, 2005; Keeney et al., 2006, Williams & Webb, 1994). In this study, the Delphi questionnaires provided quantitative data which reported on the relevance of strategic indicators as judged by the panel of experts. The strategic indicators developed by Taylor and Massy (1996) provided a basis for the selection of indicators by panel members. In order to generate strategic indicators that are unique to Assemblies of God colleges, panelists had the opportunity to suggest new indicators. These suggestions were presented to the entire panel in order to be rated according to their relevance to Assemblies of God colleges.

The Delphi method. The Delphi method was first developed by Norman Dalkey and Olaf Helmer (1963) when they were associated with the Rand Corporation in the 1950s (Lang 1994; Linstone & Turoff, 2002). Although originally created for research and forecasting in national defense (Helmer & Rescher 1959), the technique was modified into an established research tool that became widely used (Dalkey, 1972; Linstone & Turoff, 2002). In the literature, the Delphi method has been used in a variety of fields, such as needs assessment, program planning, policy determination, and resource allocation (Hsu & Sandford, 2007).

The Delphi method is well suited for subject matters which are associated with rapidly changing events (Patton, 1990), issues for which there is little historical evidence (Martino, 1972), or subject matters which are unusually complex (Sweigert & Schabacker, 1974). The Delphi method is popular among researchers who collect expert judgment on a problem in order to: (a) document and assess those judgments (Stewart,

2001), (b) capture the areas of collective knowledge held by professionals which is not often verbalized and explored (Stewart & Shamdanasi, 1990), and (c) force new ideas to emerge about the topic (Franklin & Hart, 2007). Linstone and Turoff (2002) offered a list of practical considerations which may lead to the use of the Delphi method:

> The problem does not lend itself to precise analytical techniques but can benefit from subjective judgments on a collective basis
>
> The individuals needed to contribute to the examination of a broad or complex problem have no history of adequate communication and may represent diverse backgrounds with respect to experience or expertise
>
> More individuals are needed than can effectively interact in a face-to-face exchange
>
> Time and cost make frequent group meetings infeasible
>
> The efficiency of face-to-face meetings can be increased by a supplemental group communication process
>
> Disagreements among individuals are so severe or politically unpalatable that the communication process must be refereed and/or anonymity assured
>
> The heterogeneity of the participants must be preserved to assure validity of the results, i.e., avoidance of domination by quantity or by strength of personality ("bandwagon effect"). (p. 4)

The Delphi method offers several advantages to the present research. First, is the fact that information provided by panel members is kept anonymous (Helmer & Rescher 1959). Anonymity promotes honest answers from panelists, in that they can answer free from peer pressure (Beech, 1991; Dalkey, 1972). Moreover, anonymity encourages panelists to speak up who might otherwise feel intimidated about sharing their judgment (Dalkey, 1972; Linstone & Turoff, 2002). This is especially important when panelists vary in their levels of experience with the research topic, or work together in a hierarchal

environment such as higher education (Williams & Webb, 1994). The anonymity offered by the Delphi method was especially important because this study involved data collection at religiously affiliated institutions. The resilience of these institutions, due to a strong sense of tradition and community, is well known (Benne, 2001). This sense of tradition and community was a potential source of bias in this study, in that it may compel panelists to provide responses that resemble institutional ideals more than reality. However, the anonymity of the Delphi method assured panelists that they will not be associated with responses that do not conform to tradition or ideas held by their peers.

Additional advantages of the Delphi method are derived from its sequential structure. The Delphi's structured communication allows panelists adequate time to reflect between rounds, while keeping them focused on the problem (Delbecq, Van de Ven, & Gustafson, 1975; Lang, 1994). This structured communication includes a controlled feedback process, which allows panelists to rethink their previous answers in light of information other experts have provided (Dalkey, 1972; Ludlow, 1975). The quantitative nature of the Delphi questionnaires provides numeric data that is suitable for the use of a variety of statistical analysis techniques for interpretation (Dalkey, 1972; Ludlow, 1975; Douglas, 1983). More recently, the advent of the internet has made the use of the Delphi method must faster, easier, and cheaper (Franklin & Hart, 2007; Willaims & Webb, 1994; Witkin & Altschuld, 1995).

Several additional strengths of the Delphi method have been observed in the literature. For instance, the Delphi method offers the advantages of a flexible design, which can be adapted to multiple contexts (Williams & Webb, 1994) and research goals

(Linstone & Turoff, 2002). Also, the Delphi method offers the advantage of data collection from experts, whose daily experience inside the research problem cannot be paralleled by reviewing literature or engaging in fieldwork (Delbecq et al., 1975; Lang, 1994). Finally, Franklin and Hart (2007, p. 241) observed that the Delphi method is "uniquely suited to capture immediate changes in the internal and external environment of an institution."

An important limitation of the Delphi method stems from its time consuming nature. Several rounds of data collected from experts with strong views create a large amount of data for the researcher to analyze (Hsu & Sandford, 2007). Also, the Delphi process is time consuming for participants, not only in the time required to complete questionnaires but also in the number of questionnaires that must be completed (Franklin & Hart, 2007; Hsu & Sandford, 2007). Delphi studies are plagued by high dropout rates, as panelists sometimes fail to remain in the study until the final round is completed (Ludwig, 1994). Researchers have observed that the dropout rate may introduce a bias to the resulting data set, in that only the panelists who feel the strongest about the research topic remain in the study (Franklin & Hart, 2007). Moreover, the reduced number of respondents in the final round hurts the study the most, since it is the last round that produces the final consensus (p. 242).

A second set of limitations associated with the Delphi method result from a lack of universal standards regarding data analysis. For instance, there are no agreed-upon limits for panel size or the statistical analysis of questionnaire data (Keeney et al., 2006). The question of data analysis is especially vexing for researchers who set out to

objectively classify survey items as *important* or *controversial* among panel members (Franklin & Hart, 2007). Some studies average response data, others use the mode, mean, or standard deviation regarding the questions of importance and controversy (Hsu & Sandford, 2007). Another limitation lies in the fact that there is no universal definition of *expert*, in that the criteria of an expert vary among research topics and fields of study (Franklin & Hart, 2007). Finally, no universally accepted definition of *consensus* can be found in the literature, which is significant in that the Delphi is designed to facilitate the convergence of expert judgments towards consensus (Franklin & Hart, 2007; Williams & Webb, 1994).

The harshest criticism of the scientific rigor of the Delphi method attacks the inability of researchers to duplicate Delphi results. To be sure, the results of a Delphi study cannot be replicated when the same study is performed again using a different expert panel. Reid (1988) maintained that the question of replicability is still unanswered. Of course, one need only read the earliest texts describing the Delphi method to understand the qualitative aspect of this method (Mitroff & Turoff, 1975; Scheele, 1975), and the usefulness of qualitative inquiry which seeks to describe the perceptions and experience of participants (Creswell, 2013; Guba & Lincoln, 2003).

The Appropriateness of the Delphi Method for this Study

The Delphi method has been used in higher education to explore questions of cost-effectiveness, curriculum development, campus planning, the identification of institutional goals, and the creation of evaluation tools (Judd, 1972). The Delphi method has also been used effectively by researchers performing dissertation research in higher

education. According to Shelton (2010), more than 300 dissertations written in the field of higher education have used the Delphi method. The researcher identified four dissertations in a ProQuest search for dissertations using the Delphi method to select indicators to be used on the institutional level. These dissertations are identified in Table 8.

Table 8

Dissertations Using the Delphi Method to Identify Indicators in Higher Education

Year	Topic	Author
(1980)	Indicators identified to measure the institution's ability to deliver quality education	Clewell, B.C.
(2006)	Indicators identified to report on institutional processes and strategies in higher education	McCarthy, A. F.
(1990)	Indicators of organizational effectiveness identified, with special reference to adult education	Miller, K. L.
(1989)	Indicators of organizational effectiveness identified for use at community colleges	Woodward, N. M.

The Delphi method is especially well suited for the present study, and has been used more extensively for the identification of other kinds of indicators in higher education (Shelton, 2010). Although the Delphi method was not mentioned in any of the literature reviewed in Chapter 2, the descriptions of how to effectively identify indicators align well with the Delphi process. Recall the importance that Banta and Borden (1994) placed on expert opinion, and their conceptualization of the researcher as facilitator for academic leaders in the process of selecting indicators. This of course fits the description of the Delphi method, in that it is the knowledge and experience of the panelists which

direct the research and arrive at a consensus (Linstone & Turoff, 2002). Dolence and Norris (1994) referred to the selection of indicators through brainstorming. The Delphi method is similar to brainstorming but more structured and not subject to the pitfalls of face-to-face communication (Day & Bobeva, 2005). Baker (2002) lists teamwork as a key ingredient to the identification of indicators. The Delphi method also places a high value on teamwork, in that the input of all panelists is equally valued and the communicative process is structured such that everyone has equal opportunity to provide data (Day & Bobeva, 2005; Hsu & Sandford, 2007).

Several practical considerations also make the Delphi method the most appropriate research design for the present study. Expert judgment is the best and most viable source of data for the selection of indicators at Assemblies of God colleges, in that there are not previously developed measures or instruments for this task. Also, the panel must consist of a number of people at participating Assemblies of God colleges, which are distributed across the United States. The anonymous nature of the Delphi method is also favorable for these panelists to be able to provide data, in that the participants are all coworkers in a hierarchical professional setting. Finally, as Banta and Borden (1994) pointed out, indicator systems are more likely to be used when they are prepared by those individuals who are intended to use them. Hence, the indicator system that this research creates will be more likely to be used at Assemblies of God colleges because the panel is composed of leaders from these institutions.

The Delphi process. Delphi studies can be constructed to include any number of rounds. Some Delphi studies do not limit the number of rounds they will include, with

the intention of doing as many rounds as needed to reach consensus. Delphi studies may also limit the number of rounds they will include, based on research design and practical considerations such as time constraints and the possibility of high dropout rates among participants. The most commonly suggested number of rounds to reach a viable consensus is three or four (Hsu & Sandford, 2007; Franklin & Hart, 2007; Linstone & Turoff, 2002; Ludwig, 1994). The more rounds a Delphi study includes the greater the dropout rate among participants tends to be (Ludwig, 1994; Franklin & Hart, 2007). Some researchers have also noticed a tendency for less new data to be collected after the second time a panel has reviewed the same information (Hsu & Sandford, 2007; Linstone & Turoff, 2002).

One key factor in determining the number of rounds in a Delphi study is the design of the first round questionnaire. In some Delphi studies the first round questionnaire focuses on the collection of qualitative data, typically collected using open-ended questions (Hsu & Sandford, 2007; Keeney et al., 2006). Hence, the purpose of the first round questionnaire is primarily to identify information that the panelists judge to be relevant to the problem and to set the boundaries of the discussion (Franklin & Hart, 2007; Hsu & Sandford, 2007; Judd, 1972; Linstone & Turoff, 2002). In this study the boundaries of the panel's discussion and the relevant information was largely predetermined by the researcher (Franklin & Hart, 2007). The first round questionnaire relied much more on closed-ended survey items based on information found in relevant literature (Couper, 1984; Franklin & Hart, 2007; Trudeau, 2004). This kind of first round questionnaire provides researchers with more usable data, thereby advancing the study

further in the first round, and it provides participants with a clear point of origin for their discussion (Couper, 1984; Franklin & Hart, 2007; Trudeau, 2004; Uhl, 1983).

Below is an overview of the general progression of a three round Delphi study that was the framework of this research. Three Delphi rounds were used because previous research suggested that this number of rounds would collect adequate data and enable the panel to reach consensus (Hsu & Sandford, 2007; Linstone & Turoff, 2002). Limiting this study to three rounds also served to avoid the high dropout rates associated with longer Delphi studies (Ludwig, 1994; Franklin & Hart, 2007).

Round I. Questions for the first round are created by the researchers after a thorough review of relevant literature (Franklin & Hart, 2007). These questions are mostly closed-ended and ask for responses on a Likert scale, but do allow participants to offer qualitative feedback. Panelists are commonly asked to rank order a list of statements according to relevance or priority. The data collected in the first round are used by the researchers to create the questionnaire for the second round (Hsu & Sandford, 2007).

Round II. In this round panelists receive the second questionnaire that includes a description of responses in the first round as well as their frequencies. Each participant's second round questionnaire also displays his or her answer to each item from the first round. Participants can now consider and revise their responses from Round I in light of responses provided by the entire panel. Statements that participants suggested in Round I are also presented in the Round II questionnaire to be rated by panelists. The purpose of the second round is to identify areas of agreement and disagreement among panelists

(Ludwig, 1994) and to begin working towards stability in responses (Franklin & Hart, 2007). Convergence of responses tends to occur as panelists further reflect on their answers to the first round, contrasting them to the answers provided by the other panelists (p. 240). The second round can also provide panelists the opportunity to offer feedback on how the researchers have summarized the findings in the first round (Hsu & Sandford, 2007). Delphi studies may retire some survey items after the second round if the panel has already come to consensus, or if response data do not significantly change between Rounds I and II (Scheibe, Skutsch, & Schofer, 2002).

Round III. The third round questionnaire typically shows panelists items from the previous questionnaire, along with response statistics from the entire panel for each item. Again, panelists are shown their own response to each item from the previous round and can consider revising their responses to these items in Round III. This represents the panelists' last opportunity to come to consensus on questionnaire items (Ludwig, 1994). If panelists have made any new suggestions in Round II they can be presented to the panel in this round for their consideration (Franklin & Hart, 2007). Some Delphi studies give panelists the opportunity to provide an explanation for answers that are outside the consensus in the final round (Pfeiffer, 1968).

Participating Institutions

There are 12 accredited institutions of higher education endorsed by the Assemblies of God. This endorsement requires strong ties with the Assemblies of God in the governance and academic mission of these institutions. All endorsed colleges must adhere to the following criteria, which are described by the AAGHE (2010):

1. 90% of board members are associated with the Assemblies of God, either as ministers or church members.

2. 80% of all FTE faculty are associated with the Assemblies of God, either as ministers or church members.

3. The institution is sponsored by the General Council of the Assemblies of God or one of its district councils.

4. The mission of the institution must include the integration of faith and learning, formation of mature Christians, commitment to evangelism, commitment to diversity, development of loyalty to the Assemblies of God, and preparation of leaders for the Assemblies of God.

5. The institution shall have enforceable chapel attendance policies.

6. A minimum number of Bible and theology courses are required for all programs of study.

The foregoing criteria of endorsement ensure that Assemblies of God colleges share similar missions and maintain strong ties to the denomination. Based on these similarities, endorsed colleges can form a viable peer group for the selection of strategic indicators and the comparison of indicator data. Of the 12 accredited Assemblies of God colleges, six were invited to participate in this study. However, the number of participating institutions is only five because one institution elected to not participate. Institutions were selected for invitation based on total headcount enrollment, cost of tuition, and the presence of a graduate program. These data are presented below in Table 9. The six institutions invited to participate had the highest total headcount enrollment of all endorsed colleges. They were also six of the seven most expensive colleges to attend, based on the cost of tuition. Five of the colleges invited to participate had graduate programs. In Table 9 the names of institutions have been withheld and replaced by capital letters.

Table 9

Institutional Data for A/G Endorsed Colleges

Institution	Total Headcount Enrollment	Cost of Tuition	Graduate Program
A	2,703	$17,988	X
B	2,319	$28,500	X
C	2,079	$17,930	X
D	2,032	$15,750	X
E	1,613	$24,180	X
F	1,295	$18,610	
G	1,040	$16,642	X
H	448	$12,412	
I	389	$9,200	
J	227	$10,709	
K	73	$9,360	
L	25	$3,696	

Source: AAGHE (2012)

Study Population, Sample Frame, and Sampling Plan

Keeney et al. (2006) pointed out that panelists cannot represent a random selection because they must be chosen on the basis of their expertise. Delbecq et al. (1975) suggested that top management decision makers, who will use the results of the Delphi study, serve as panelists. Therefore, the researcher determined that this study population included the president and chief business officer from each participating institution. These administrators were necessary to the panel because of the special expertise they could offer. Presidents have a unique overview of the institution and its

stakeholders. The chief business officers have the most qualified understanding of financial issues facing the institution as well as the relevance of financial indicators under consideration. Prior to the study the researcher determined that not all participating institutions had enough senior administrators to meet the criteria of expertise. Therefore, the researcher decided to include chief academic officers from each participating institution on the panel. These officers are important because they offer an understanding of the academic mission of the institution and how that mission is being pursued.

In addition to presidents, chief business officers, and chief academic officers, the study population included select experts from among the senior administrators, veteran faculty, and trustees at participating Assemblies of God colleges. Ludwig (1994) suggested that the best panelists in a given field are most readily recognized by experts within that field, and panelists should therefore be nominated by a pool of experts. Hence, the sampling frame for administrators (not including presidents, chief academic officers and chief business officers), faculty, and trustees was determined by a three-person pool of experts associated with the AAGHE. The AAGHE is the office at the denominational headquarters that coordinates various activities and data reporting among Assemblies of God colleges. The researcher provided the AAGHE with the criteria by which panelists were identified at participating colleges. The use of the three-person pool to select participants guarded against the selection of panelists based on the researcher's personal preference, which Ziglio (1996) warned can weaken a study's validity.

Criteria of expertise. "The single most confounding factor in panel selection in higher education is that of deciding 'who is an expert" (Judd, 1972, p. 180). In the

interest of scientific rigor, Franklin and Hart (2007) advised researchers to determine criteria for the selection of panelists before the selection process even begins. However, there are no criteria for panel selection in the Delphi literature (Keeney et al., 2006) and the criteria for most studies are largely left to the discretion of the researcher (Oh, 1974). While the president, chief academic officer, and chief business officer of each participating institution are automatically included in the panel, a committee of three people who are associated with the AAGHE used the following criteria to identify expert panelists among additional administrators, faculty, and trustees from participating institutions.

Criteria for senior administrators. These participants must hold a terminal degree and have at least five years of service at their respective institutions. The number of years of service was reduced from ten to five before the study began in order to insure that each institution would have a pool of administrators that meet this criterion. These participants may have spent part of their years of service as lower level administrators or as faculty members at their institution. Examples of positions these participants hold include vice president of student affairs and dean of a college within the institution.

Criteria for faculty members. Participating faculty must hold a terminal degree and have served as faculty members at their respective institutions for at least ten years.

Criteria for trustees. These participants must each have at least eight years of experience as a trustee at their participating Assemblies of God college.

Panel size. Although no panel size is suggested in the literature, larger panels do lend more validity to the findings of a Delphi study (Keeney et al., 2006; Day & Bobeva,

2005). Witkin and Altschuld (1995) noted that the majority of Delphi studies employ fewer than 50 panel members. Delbecq et al. (1975) suggested that as few as 15 panelists could be used, assuming that their backgrounds are all similar and that the research agenda is not complex. Keeney et al. (2006) warned against beginning a Delphi study with too few panelists, given the tendency of panelists to drop out of the study. Hsu and Sandford (2007) warned against too many panelists, in that more panelists create more data and thereby slow down the tempo at which the researcher can move the study from one round to the next. For this Delphi study, eight individuals were invited to the Delphi panel from each of the five participating colleges, bringing the total number of possible panelists to 40.

Instrumentation and Procedure

This Delphi study used three rounds of Qualtrics questionnaires, which participants were invited by email to complete online. The Round I questionnaire was constructed after thorough review of relevant scholarly literature. The researcher also consulted promotional material, websites, as well as AAGHE data and endorsement materials for participating institutions. The first round questionnaire included two rank items. These were survey items in which participants rank several statements about attributes of their institution according to how important they are to strategic position. Four statement items were also created by the researcher. Panelists used a five point Likert scale to report how strongly they agreed or disagreed with each of the four statements regarding their institution. The rank items and the statement items were

included in Round II and Round III to determine if consensus can be established for these items.

There were 60 indicator items on the Round I questionnaire. These were survey items in which panelists rated indicators on a five point Likert scale according to their relevance for use at Assemblies of God colleges. Of these indicators, 51 were selected from Taylor and Massy (1996) and nine were created by the researcher. Panelists also had the opportunity to suggest entirely new indicators. Suggestions from participants in Round I and Round II were presented to the entire panel in the subsequent round. Round II and Round III established consensus on which indicators were relevant for use at Assemblies of God institutions. The Round III questionnaire required participants to rate both the relevance and the feasibility of strategic indicators. Round III also introduced two Likert items in which participants responded according to how useful and how feasible peer data sharing would be at Assemblies of God colleges.

Pilot study. Two pilot studies were performed using the survey instrument for Round I. Both pilot studies were carried out at small Christian colleges not associated with the Assemblies of God but similar to the participating colleges in their mission and size. Eight individuals that met the selection criteria for panelists were selected from each of the institutions that participated in the pilot study. The first pilot study was conducted in November of 2013. Eight individuals invited to participate in this pilot study completed the survey. They reported that the back arrow button did not work and this was remedied before the second pilot study. The data Qualtrics recorded from this pilot study revealed two more technical problems with the survey instrument that were

rectified before the second pilot study. First, data collected from the Likert scale items were averaged by Qualtrics such that higher Likert ratings received lower mean scores. Second, not all items required a response before the survey would go to the next screen. The second pilot study was carried out in January of 2014. Only three of the eight individuals selected to participate in the second pilot study completed the questionnaire. No changes to the instrument were suggested by participants in the second pilot study.

Variables and measures. The research variables were the strategic indicators for Assemblies of God colleges as identified by a panel of experts. These variables related to research questions two and three. The statements regarding aspects of institutional life and their importance to strategic position were also research variables, and related to research question one. All three rounds provided data for research questions one, two, and three. Round III alone provided data for all four research questions, in that it was the only round which included the two survey items regarding the usefulness and feasibility of sharing indicator data.

Research questions:

1. What aspects of the institution (i.e., finance, student life, academics, etc.) are the most important to strategic position at Assemblies of God colleges? ***(Delphi Rounds I, II, & III)***
2. What are the best metrics for reporting on the selected aspects of the institution? ***(Delphi Rounds I, II, & III)***
3. Which of the strategic indicators suggested by Taylor and Massy (1996) are useful at Assemblies of God colleges? ***(Delphi Rounds I, II & III)***

4. How readily can the indicators identified in research questions 2 and 3 be compared across institutions? ***(Delphi Round III)***

The measures used in Delphi studies vary greatly (Franklin & Hart, 2007; Williams & Webb, 1994). Descriptive statistics are typically used to determine which items to keep from one round to the next, and which items attain consensus among participants. Delphi studies have used the mean, mode, standard deviation, inter quartile range value, and percent of agreement to measure consensus among panelists (Keeney et al., 2006; Hsu & Sandford, 2007). This Delphi study used the mean response and the percent of agreement among responses to determine consensus. Change in the distribution around the mode was used to measure stability in responses between Rounds I and II.

Validity plan. The Delphi method is designed to find consensus in the judgment of experts through several rounds of structured anonymous communication (Dalkey, 1972). The resulting consensus is considered to be a measure of validity. Stronger consensus among the experts is indicative of stronger validity for the results (Keeney et al., 2006; Mitroff & Turoff, 1975).

Survey procedures. Skulmoski, Hartman, and Krahn (2007) observed that the high dropout rate of panelists in Delphi studies can be reduced when the time between rounds is as short as possible. Hence, the researcher quickly analyzed response data to create the questionnaires for Round II and Round III. This was facilitated by the use of the web-based survey tool Qualtrics. Moreover, survey items whose response data had stabilized between Rounds I and II were retired, thereby encouraging participation by

reducing the length of the Round III questionnaire. These items were retired because a lack of change in response data implied that the panel was not moving toward consensus (Scheibe et al., 2002).

Steps in a Delphi study. The Delphi method structures group communication in order to deal with a complex problem (Linstone & Turoff, 2002). This occurs through a series of questionnaires, or rounds, which are used to collect data until consensus is reached among panel members (Hsu & Sandford, 2007; Keeney et al., 2006). The following steps outline the procedure used to carry out the data collection process for this Delphi study:

Step 1. The Alliance for Assemblies of God Higher Education (AAGHE) identified eight panelists from each of the five participating Assemblies of God colleges.

Step 2. The pilot study was carried out at two religiously affiliated colleges, and their feedback used to modify the first round instrument.

Step 3. A completed Institutional Review Board application was submitted to the University of Nebraska-Lincoln in order to begin the study.

Step 4. An invitation email explaining the research topic and the design of the study was sent to the sampling frame of 40 panelists identified by the AAGHE.

Step 5. Panelists completed the online questionnaire for Round I, which included an online informed consent form.

Step 6. Reminder emails were sent by the researcher to encourage participation among potential panelists who did not respond to the email invitation.

Step 7. The Round II questionnaire was developed using the data from the Round I questionnaire. The Round II questionnaire included the mean scores and standard deviations of items on the first questionnaire, as well as suggested indicators from Round I.

Step 8. Institutional Review Board approval was obtained for the Round II questionnaire.

Step 9. Panel members were notified by email that the web-based questionnaire for Round II was available for their completion.

Step 10. Follow up emails were sent to panelists who had not completed the Round II questionnaire.

Step 11. The questionnaire for Round III was developed using data from the Round II questionnaire. The new questionnaire also showed the mean scores and standard deviations for items on the previous questionnaire.

Step 12. Repeat steps 8 through 10 for the Round III questionnaire.

Procedures for Likert responses. For the present study, a Likert scale (1 = *None*, 2 = *Low*, 3 = *Middle*, 4 = *High*, 5 = *Very High*) was used to rate the relevance and feasibility of strategic indicators. Six statement items used a Likert scale to measure how strongly participants agree or disagree with each statement (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, 5 = *Strongly Agree*). No standard of consensus exists in the Delphi literature, with researchers using agreement levels

ranging from 51% to 100% (Keeney et al., 2006; Franklin & Hart, 2007; Williams & Webb, 1994). However, 70% is most commonly used as the desired level of consensus (Shelton, 2010; Vernon, 2009). In this study, consensus was defined as 70% agreement by expert panelists. Likert items that attained a mean rating of 4 or greater, along with 70% of panelists in agreement on the rating of 4 or greater, were judged by the panel as relevant to Assemblies of God colleges.

Procedures for retirement of survey items. Likert survey items were retired from the study after Round I and Round II if the panel demonstrated consensus that the item was relevant, defined as 70% agreement and a mean rating of 4 or greater. Likert items were also retired after Round II if their response data demonstrated stability, defined as a change of less than 15% in the distribution of responses around the mode between Rounds I and II (Tyson, 1990). Stability in response data is indicative of an item for which the panel is not able to come to consensus. According to Scheibe et al. (2002), two successive distributions of responses that demonstrate a change of less than 15% may be said to have reached stability. However, successive distributions with more than 15% change around the mode should be included in later rounds, since they have not come to stability or consensus.

Response data that demonstrated stability for a hypothetical Likert item are presented in Table 10. In this example change around the mode was figured using data from Rounds I and II. First, the absolute difference in the number of responses for each point on the Likert scale was counted. The total of these absolute differences was divided by two, because one participant who changes his or her response from one rating to

another results in changes at two points on the Likert scale. This produced the net participant changes, which was divided by the total number of participants to calculate the percent change. Only response data from participants who completed both Round I and Round II were used to figure stability because the number of participants reduced between these rounds. The example indicator in Table 10 would have been retired because the percent change was less than 15%.

Table 10

Calculation of Response Stability

Likert Rating	1	2	3	4	5
Absolute Difference in Responses	0	2	1	3	0
Total Absolute Difference in Responses	6				
Net Participant Changes	3				
Number of Participants	23				
Percent Change	13%				

Procedures for rating aspects of institutional life. The survey instrument used for the present research included two rank items designed to rank aspects of institutional life (i.e., finance, student development, academics, etc.) by importance to strategic position. These items were lists of institutional attributes that participants ranked according to relevance to strategic position. Round II and Round III established consensus among panelists regarding responses to these rank items.

Summary

Chapter III demonstrated the appropriateness of the Delphi method for this study, as well as how the Delphi method was carried out in this research. The selection of participating institutions was described, as well as the criteria for the selection of expert panelists. The criteria for relevance and consensus regarding Likert survey items were also defined, as well as response stability.

In the following chapter the researcher reports the results of each round of the Delphi study. A description of the results reports aspects of Assemblies of God colleges that were judged by the panel as the most important to strategic position. In Chapter IV, the researcher identifies the strategic indicators that compose the final set of indicators selected by the panel of experts.

Chapter IV

Results

In this chapter the findings of the Delphi study are reported. The study was composed of three rounds of questionnaires and was conducted over a six week period in the spring of 2014. Panelists for this Delphi study were leaders selected from Assemblies of God colleges. The panel identified strategic indicators that reflect the mission and distinctiveness of the participating institutions. To select strategic indicators, panelists rated the relevance of indicators suggested by Taylor and Massy (1996) as well as indicators suggested by the researcher. Panelists also had the opportunity to suggest their own indicators, and the relevance of these indicators was rated by the entire panel. The final set of strategic indicators selected through the Delphi process emerged from panelist agreement as relevant to Assemblies of God colleges.

Research Questions

The following research questions guided this study in the selection of strategic indicators for Assemblies of God colleges.

1. What aspects of the institution (i.e., finance, student life, academics, etc.) are the most important to strategic position at Assemblies of God colleges?
2. What are the best indicators for reporting on the selected aspects of the institution?
3. Which of the strategic indicators suggested by Taylor and Massy (1996) are useful at Assemblies of God colleges?
4. How readily can the indicators identified in research questions 2 and 3 be compared across institutions?

Participating Institutions

Participants were selected from the five participating institutions. These five institutions were selected from the 12 accredited colleges endorsed by the AAGHE. Six institutions were invited to participate, but only five accepted the invitation. The invited institutions had the highest total headcount enrollment of all endorsed colleges. They were also six of the seven most expensive colleges to attend, based on the cost of tuition. Five of the colleges that were invited to participate had graduate programs.

Participants

Eight participants were selected from each of the five participating institutions, creating a pool of 40 possible expert panelists. The president, chief academic officer, and chief business officer of each participating institution were automatically included in the panel. The remaining five participants were selected from each institution: One senior administrator, two faculty members, and two trustees. These five participants were selected by a committee of three people who are associated with the AAGHE. This committee used the criteria established by the researcher to identify the five panelists at each institution.

Of the 40 experts invited to participate in the Delphi study, 28 initially signed the online informed consent document. The Round I questionnaire was completed by 26 participants. These 26 participants were invited to complete the Round II questionnaire, which was started by 25 participants. The Round II questionnaire was completed by 23 participants. These 23 were invited to complete the Round III questionnaire, which was started by 16 participants and completed by 14 participants. The overall completion rate

for the three rounds was 54%, in that 14 of the 26 participants who completed Round I also completed Round III. In each round, only data from completed questionnaires were analyzed. Participation rates for each round are provided in Table 11.

Table 11

Percentage of Panel Participation for Each Delphi Round

Delphi Round	Experts Invited	Surveys Started	Surveys Completed	Participation Rate
Round I	40	28	26	65%
Round II	26	25	23	92%
Round III	23	16	14	61%

Description and Results of Delphi Rounds

Delphi Round I data analysis and results. Invitation emails were sent out to the 40 invitees on March 26, 2014. Reminder emails were sent out to 31 invitees who had not yet completed the questionnaire on March 30, 2014. The final email reminder was sent out to 19 invitees who had not yet completed the questionnaire on April 6, 2014. The first round was closed on April 8, 2014, with 26 participants having completed the questionnaire.

The Round I questionnaire included four statement items regarding aspects of institutional life at the participating institutions. Panelists responded to these four items on a five point Likert scale according to how strongly they agree or disagree with each statement. The questionnaire also included two rank items, composed of lists of institutional attributes that participants were asked to rank according to importance. The Round I questionnaire included 60 strategic indicators items, which panelists rated on a

five point Likert scale according to relevance for use at Assemblies of God colleges. Panelists also had the opportunity to suggest new indicators.

***Round I statement items*.** Response data for the four statements regarding institutional life at participating institutions are presented in Table 12. For these items participants responded using a five point Likert scale to report how strongly they agree or disagree with each statement. The mean response and standard deviation for each statement are reported in Table 12. The percent of participants that either agreed or strongly agreed with the corresponding statement, defined as a Likert response of either 4 or 5, is reported in the *Consensus* column. Two items were retired after Round I because the panel had come to consensus that these items were relevant, defined as 70% consensus and a mean Likert rating of 4 or higher. These two items are identified in the *Retired* column.

Table 12

Results for Round I Statement Items

Statement	Mean	SD	Consensus	Retired
To what extent do you agree that students choose to attend your institution because of the spiritual formation you offer them.	4.54	1.24	92%	Yes
To what extent do you agree that chapel services are the heart of spiritual life on campus.	3.81	1.2	73%	No
To what extent do you agree that the integration of faith and learning is the greatest academic advantage that your college offers students.	4.27	1.08	81%	Yes
To what extent do you agree that your college adequately equips faculty in all disciplines to meaningfully integrate faith and learning in the classroom.	3.69	0.84	70%	No

Round I rank items. The Round I questionnaire included two items in which participants ranked institutional attributes according to their importance. Data from these rank items are presented in Table 13 and Table 14. In both tables, the rank that statements are assigned when ordered according to their mean ranking by panelists is reported in the *Rank* column. The percent of participants who ranked statements as they are ordered in the *Rank* column is presented in the *Percentage* column. The mean rank for each statement is also presented.

The first rank item asked participants to rank attributes of their institution according to their importance to the pursuit of the institutional mission. Response data from this rank item are presented in Table 13. The attribute *Commitment to the spiritual formation of students* was ranked 1 by 57.69% of panelists, giving it a mean rank of 2.15. *Academic quality* was also important to panelists, 46.15% of whom gave it the rank of 2. The mean rank for *Academic quality* was 2.31.

The second rank item asked panelists to rank the attributes of their institution according to their importance in the spiritual formation of students. Response data from this rank item are displayed in Table 14. The attribute *Integration of faith and learning* was ranked the highest, with a mean rank of 1.96, and was given the rank of 1 by 53.85% of participants. *Required Bible and theology courses in all majors* was also ranked as an important attribute, with a mean rank of 2.81. This attribute was ranked 2 by 34.62% of participants.

Table 13

Round I Rank Item Results: Mission Pursuit

Attribute	Rank	Mean	Percentage
Commitment to the spiritual formation of students	1	2.15	57.69%
Academic quality	2	2.31	46.15%
Quality and productivity of personnel	3	4.12	15.38%
Affordability	4	4.96	19.23%
Job preparation of students	5	5.81	15.38%
Management of financial resources	6	5.81	15.38%
Student development programs	7	6.27	19.23%
Wide selection of majors	8	6.88	15.38%
Condition of facilities	9	7.15	7.69%
Athletic programs	10	9.54	0.00%

Table 14

Round I Rank Item Results: Spiritual Formation

Attribute	Rank	Mean	Percentage
Integration of faith and learning	1	1.96	53.85%
Required Bible and theology courses in all majors	2	2.81	34.62%
Chapel services	3	3.27	26.92%
Student led ministry, including dorm life	4	4.08	23.08%
AG affiliation of faculty	5	4.50	23.08%
Spiritual emphasis week	6	5.58	23.08%
Enforced moral code on campus	7	5.81	50.00%

Round I indicator items. The results for 60 items on the Round I questionnaire that assessed the relevance of strategic indicators are presented from Table 15 through Table 20. Of these indicators, 51 were selected from Taylor and Massy (1996). Nine additional indicators were created by the researcher after a review of pertinent literature, AAGHE endorsement materials, and the websites of participating institutions. Participants rated each indicator on a five point Likert scale according to how relevant the indicator would be to their institution. For each indicator the mean Likert rating is presented, as well as the standard deviation. The level of consensus for each indicator was figured as the percentage of participants who rated the indicator as relevant, defined as a Likert rating of 4 or 5. This percentage appears in the *Consensus* columns on Tables 15 through 20. Round I response data for ten indicators satisfied the criteria of consensus and relevance, defined as a level of consensus of 70% or greater and a mean rating of 4 or greater. These ten indicators were included in the final list of relevant indicators (Table 37), but were retired from the questionnaires for subsequent rounds because the panel had reached consensus that these indicators were relevant.

Each indicator item on the Round I questionnaire included its own textbox, in which participants were invited to enter comments and suggestions concerning that indicator. For each indicator, the number of participants who provided a comment is reported in the *Comments* column in Tables 15 through 20. The portion of the Round I questionnaire regarding indicators was divided into five pages, with a large textbox at the bottom of each page. Participants were invited to provide additional comments in these textboxes. The comments provided for individual indicators, and the comments provided

at the bottom of each page, were used to identify a total of 32 new indicators that were introduced in Round II.

Indicators of academic excellence. Data related to indicators of academic excellence are presented in Table 15. This section of the Round I questionnaire was comprised of eight indicators of academic excellence selected from Taylor and Massy (1996). Response data for one indicator item met the criteria for relevance and consensus in Round I. Hence, this indicator item was removed from the questionnaires for Rounds II and III, and is identified in the *Retired* column. The large textbox located at the bottom of this section of the questionnaire was used by 11 participants to enter comments. These comments, along with the comments provided for individual indicators, were used to identify 11 new indicators of academic excellence that were included in Round II.

Indicators of the integration of faith and learning. Data from two indicators regarding the integration of faith and learning are presented in Table 16. These indicators were created by the researcher because of the importance participating institutions place on the integration of faith and learning. Neither of these indicators was retired after Round I. Ten participants offered feedback and suggested indicators in the space designated on the questionnaire. This feedback was used to identify five new indicators for the integration of faith and learning that were introduced in Round II.

Indicators of spiritual formation. The five indicators for the spiritual formation of students that made up this section were created by the researcher. These indicators were created because spiritual formation is a known priority at the participating

Table 15

Round I Indicator Item Results: Academic Excellence

Indicator	Mean	SD	Consensus	Comments	Retired
Average SAT score of incoming freshmen.	3.54	0.86	38.46%	6	No
Average GRE score among graduates.	3.23	1.03	38.46%	1	No
Percent of students enrolled in four-year programs who complete their degree in five years or less.	3.73	0.96	61.54%	2	No
Percent of graduates who enroll in graduate school within five years.	3.42	0.76	50%	2	No
Book and monograph volumes in library, including those available via internet, per FTE student.	2.96	0.96	23.07%	1	No
Percent of faculty who hold terminal degrees.	4.00	0.63	80.77%	1	Yes
Percent of faculty who are part-time.	3.15	0.83	30.77%	1	No
Ratio of FTE faculty to FTE students.	3.73	0.67	69.23%	1	No

Table 16

Round I Indicator Item Results: Integration of Faith and Learning

Indicator	Mean	SD	Consensus	Comments	Retired
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years.	3.85	1.01	69.23%	2	No
Number of hours of training faculty in all disciplines received in the integration of faith and learning in the last year.	3.65	0.98	57.69%	1	No

institutions. None of these indicators were retired after Round I. Eight participants provided feedback in the large textbox provided at the bottom of this section of the survey. Comments provided for individual indicators and in the textbox at the end of this section were used to identify four new indicators of spiritual formation that were included in Round II (Table 17).

Indicators of financial management. Round I response data for 15 financial strategic indicators selected from Taylor and Massy (1996) are presented in Table 18. Data for five indicators met the criteria for consensus and relevance. These indicators were retired from the survey and are identified in the *Retired* column. Four participants provided additional comments in the textbox located at the bottom of this section of the survey. These comments, along with the comments provided for individual indicators, were used to identify four new financial indicators that were included in Round II.

Table 17

Round I Indicator Item Results: Spiritual Formation

Indicator	Mean	SD	Consensus	Comments	Retired
The minimum number of times students are required to attend chapel in an academic year.	3.35	1.02	50%	2	No
Mean chapel attendance as a percentage of maximum possible attendance.	3.27	1.08	42.3%	2	No
Attendance at spiritual emphasis week events as a percentage of maximum possible attendance.	2.96	1.08	30.77%	1	No
Average improvement in a Bible content exam administered to students when they first arrive and again before they graduate.	3.50	0.91	53.85%	2	No
Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate.	3.81	1.06	62.93%	1	No

Table 18

Round I Indicator Item Results: Financial Management

Indicator	Mean	SD	Consensus	Comments	Retired
Tuition and fees as a percent of total current fund revenues.	4.04	0.92	76.93%	1	Yes
Instructional expenditures as a percent of total current fund expenditures.	3.88	0.71	76.92%	2	No
Plant operations and maintenance expenditures as a percent of total current fund expenditures.	3.58	0.86	50.00%	1	No

Table 18 continues

Indicator	Mean	SD	Consensus	Comments	Retired
Excess (deficit) of current fund revenues over current fund expenditures.	4.00	0.98	76.93%	1	Yes
Current fund balance for this academic year as a percent of current fund balance for last academic year.	3.6	0.97	57.7%	2	No
Long-term debt as a percent of total liabilities.	4.23	0.71	92.31%	1	Yes
Total assets as a percent of total liabilities.	4.00	0.85	80.77%	1	Yes
Change in unrestricted income as a percentage of last year's unrestricted income.	3.62	0.90	50.00%	2	No
Change in total net assets as a percentage of total net assets.	3.58	0.90	53.84%	2	No
Tuition and fees collected per FTE student.	3.96	0.72	73.08%	2	No
Percent of students with institutional scholarships and fellowships.	3.81	0.69	80.77%	1	No
Institutional scholarships and discounts as a percent of total tuition and fee income.	4.12	0.59	88.46%	1	Yes
Instructional expenditures per FTE student.	3.92	0.80	73.08%	2	No
Academic support expenditures as a percent of total current fund expenditures.	3.88	0.77	73.08%	2	No
End-of-year replacement value of plant as a percent of beginning-of-year replacement value of plant.	3.19	0.90	34.61%	1	No

Indicators of development. Round I included 12 indicator items related to development and endowment selected from Taylor and Massy (1996). One additional indicator in Table 19 was created by the researcher: *Gifts from churches as a percent of total gifts.* The researcher included this indicator because gifts from churches are an important part of the development strategy at participating institutions. Response data for indicators of development are reported in Table 19. One indicator was retired after Round I because responses satisfied the criteria for relevance and consensus. Two participants provided additional comments in the textbox at the bottom of this section of the survey. Comments provided in this section of the survey did not result in any new indicators for Round II. One participant asked for clarification regarding the following indicator in Table 19: *Gifts from parents as a percentage of total gifts.* As a result, this note was added next to the indicator in Round II: *This item refers to parents of current students and alumni.*

Indicators of students and faculty. Response data to 16 indicators regarding students and faculty selected from Taylor and Massy (1996) are reported in Table 20. One indicator in Table 20 was created by the researcher: *Ratio of FTE faculty to FTE students in Bible or ministry related courses.* This indicator was included because these courses are central to the commitment participating institutions have to the integration of faith and learning. Three indicators in Table 20 were retired after Round I because response data satisfied the criteria of relevance and consensus. Two participants entered additional comments in the textbox provided at the end of this section. These comments,

Table 19

Round I Indicator Item Results: Development

Indicator	Mean	SD	Consensus	Comments	Retired
Gifts from alumni as a percent of total gifts.	3.88	0.82	69.23%	1	No
Percent of living alumni who have given at any time in the past five years.	3.81	0.80	65.38%	1	No
Gifts from parents as a percent of total gifts.	3.12	0.91	30.77%	2	No
Gifts from other individuals as a percent of total gifts.	3.62	0.80	57.69%	1	No
Gifts from private foundations as a percent of total gifts.	3.69	0.93	61.54%	1	No
Gifts from churches as a percent of total gifts.*	3.88	0.82	76.92%	1	No
Gifts and grants as a percent of total current fund revenues.	4.00	0.75	80.77%	1	Yes
Market value of endowment per FTE student.	3.62	0.94	61.53%	1	No
Market value of endowment as a percent of total assets.	3.73	0.87	69.23%	1	No
Endowment yield as a percent of total endowment.	3.69	0.79	65.39%	1	No
Total return on endowment as a percent of total endowment.	3.62	0.80	57.69%	1	No
End of year market value of total endowment as a percent of beginning-of-year value.	3.69	0.79	65.39%	1	No
Bequests received as a percent of total gifts.	3.58	0.76	50.00%	1	No

*indicator created by the researcher

Table 20

Round I Indicator Item Results: Students and Faculty

Indicator	Mean	SD	Consensus	Comments	Retired
Percent of students who are part-time.	3.50	0.65	50.00%	1	No
This fall's total FTE students as a percent of last fall's FTE students.	4.04	0.77	80.77%	3	Yes
Percent of enrolled students in each class (freshmen, sophomores, juniors and seniors).	3.69	0.84	61.53%	1	No
Percent of freshman applicants who are accepted.	3.65	0.89	61.53%	1	No
Percent of accepted freshman who matriculate.	4.15	0.83	80.77%	1	Yes
Degrees awarded as a percent of FTE enrollment.	4.00	0.63	80.77%	1	Yes
Percent of total students from within the state.	3.12	0.86	26.92%	1	No
Percent of total students from outside the state.	3.08	0.93	26.92%	3	No
Percent of total students from outside the U.S.	3.15	0.97	38.46%	1	No
Percent of total FTE students who are Black, Hispanic, and Asian.	3.65	1.02	61.54%	1	No
Percent of FTE faculty who are Black, Hispanic, and Asian.	3.58	0.99	50.00%	1	No
Percent of FTE faculty who are women.	3.54	0.99	46.15%	1	No
Ratio of FTE faculty to FTE students in Bible or ministry related courses.*	3.42	0.81	38.46%	1	No

Table 20 continues

Indicator	Mean	SD	Consensus	Comments	Retired
Ratio of FTE faculty to FTE students in liberal arts courses.	3.50	0.76	42.31%	1	No
Ratio of FTE faculty to FTE students in courses related to professional programs such as nursing or education.	3.58	0.81	46.15%	1	No
This fall's faculty headcount as a percentage of faculty headcount last fall.	3.23	0.76	34.62%	1	No
This fall's FTE faculty as a percentage of FTE faculty last fall.	3.23	0.76	34.62%	1	No

* indicator created by the researcher

along with the comments provided for individual indicators, were used to identify eight new indicators that were introduced in Round II.

Delphi Round II data analysis and results. The 26 participants who completed Round I were invited by email to participate in Round II on April 14, 2014. The first reminder email was sent out on April 17 to the 15 participants who had not yet completed the Round II questionnaire. On April 19, 2014 the final reminder email was sent to the remaining seven participants who had not yet completed Round II. The Round II questionnaire was closed on April 21, 2014, having been completed by 23 participants.

The Round II questionnaire included two statement items regarding aspects of institutional life at participating institutions that appeared in Round I. For these two items, participants responded using a five point Likert scale. Round II also included the same two rank items as Round I, in which panelists ordered statements within each item according to importance. The remaining 82 items in Round II were all indicators, and

their relevance was rated by participants on a five point Likert scale. Of these indicators, 50 had already been rated by the panel in Round I. Comments from participants in Round I were used to identify the remaining 32 indicators that were introduced in Round II. On the Round II questionnaire, participants had the opportunity to provide comments for each indicator, and to provide comments at the bottom of each page. Items were retired after Round II if their response data demonstrated stability between Rounds I and II, indicating that the panel was not moving towards consensus on these items. Responses to an item have stabilized when the proportion of responses at each point on the Likert scale changes by less than 15% between successive rounds.

Round II statement items. Response data for the two statement items regarding institutional life at participating institutions are presented in Table 21. Participants responded using a five point Likert scale to report how strongly they agree or disagree with each statement. On the Round II questionnaire these items were presented with their mean response and standard deviation from Round I, and each participant was shown his or her own response to the item in Round I. The mean response and standard deviation for each statement are presented in Table 21. The *Consensus* column refers to the percent of participants who responded with a Likert rating of either 4 or 5, which corresponds to *Agree* and *Strongly Agree*, respectively. Both statement items were retired after Round II because the panel was not moving toward consensus that these items were relevant. This is demonstrated by the stability in response data between Round I and Round II, defined as a change of less than 15% in the distribution of responses around the mode. The percent of change in response data is expressed as a percent in the *Stability* column.

Table 21

Round II Statement Item Results

Indicator	Mean	SD	Consensus	Stability	Retired
To what extent do you agree that chapel services are the heart of spiritual life on campus.	3.81	1.2	65.22%	8.69%	Yes
To what extent do you agree that your college adequately equips faculty in all disciplines to meaningfully integrate faith and learning in the classroom.	3.69	0.84	56.52%	8.69%	Yes

*item retired because of stability

Round II rank items. The Round II questionnaire included the two rank items that were part of Round I. These items asked participants to rank statements according to importance. On the Round II questionnaire, a table was included for each of these items so participants could see response data from Round I. These tables assigned each statement a rank, which was figured as the rank each statement received when ordered by mean rank. The tables reported the percentage of participants who ranked each statement as it was ranked on the table, and the mean rank was also reported. On the tables, each participant could see the rank he or she had given statements in Round I.

Response data from the two rank items in Round II are presented in Table 22 and Table 23. In both tables, the *Rank* column reports the rank order of statements according to their mean ranking by panelists. The mean rank for each statement is also presented. The *Percentage* column reports the percent of participants who ranked statements as they are ordered in the *Rank* column.

Data from the rank item in which participants rank attributes of their institution according to their importance to the pursuit of the institutional mission are displayed in Table 22. The attributes *Wide selection of majors* and *Student development programs* switched ranks in Round II. Also in Round II, there was an increase in the percentage of participants who ranked *Condition of facilities* and *Athletic programs* 9 and 10, respectively. Data from Round I are presented in Table 22 for the purpose of comparison.

Table 22

Round II Rank Item Results: Mission Pursuit

	Round I			Round II		
Attribute	Rank	Mean	Percentage	Rank	Mean	Percentage
Commitment to the spiritual formation of students	1	2.15	57.69%	1	1.78	60.87%
Academic quality	2	2.31	46.15%	2	2.09	47.83%
Quality and productivity of personnel	3	4.12	15.38%	3	4.17	26.09%
Affordability	4	4.96	19.23%	4	5.00	17.39%
Job preparation of students	5	5.81	15.38%	5	5.87	8.7%
Management of financial resources	6	5.81	15.38%	6	6.09	17.39%
Wide selection of majors	8	6.27	19.23%	7	6.43	13.04%
Student development programs	7	6.88	15.38%	8	6.48	21.74%
Condition of facilities	9	7.15	7.69%	9	7.52	30.43%
Athletic programs	10	9.54	0.00%	10	9.57	82.61%

Data from the rank item in which participants ranked attributes of their institution according to their potential to contribute to the spiritual formation of students are presented in Table 23. The rank order of attributes did not change since Round I. However, the percentage of responses that agreed with the rank of each attribute did increase. This was especially true for the attribute *Integration of faith and learning* and the attribute *Enforced moral code on campus*, which were ranked 1 and 7, respectively. Data from Round I are presented in Table 23 for the sake of comparison.

Table 23

Round II Rank Item Results: Spiritual Formation

	Round I			Round II		
Attribute	Rank	Mean	Percentage	Rank	Mean	Percentage
Integration of faith and learning	1	1.96	53.85%	1	1.70	69.57%
Required Bible and theology courses in all majors	2	2.81	34.62%	2	2.52	34.78%
Chapel services	3	3.27	26.92%	3	3.26	30.43%
Student led ministry, including dorm life	4	4.08	23.08%	4	4.04	30.43%
AG affiliation of faculty	5	4.50	23.08%	5	4.52	30.43%
Spiritual emphasis week	6	5.58	23.08%	6	5.96	39.13%
Enforced moral code on campus	7	5.81	50.00%	7	6.00	60.87%

Round II indicator items. The remaining 82 items on the Round II questionnaire were all strategic indicator items. Of these, 50 had already been rated by the panel in

Round I. Comments from participants in Round I were used to identify the remaining 32 indicators that were introduced in Round II. Indicator items were retired after Round II if the panel came to consensus that the indicator was relevant, defined as 70% agreement on a mean Likert rating of 4 or greater. Ten indicator items were retired after Round II because their response data satisfied these criteria. These indicators were included in the final list of relevant indicators (Table 37). Indicators were retired from the survey after Round II if response data were stable, indicating that the panel was not moving towards consensus that an indicator was relevant. Stability was defined as a change of less than 15% in the distribution of responses around the mode between Round I and Round II.

The Round II questionnaire showed participants the mean response and standard deviation for each indicator in Round I. Each participant was also shown his or her rating for each indicator in Round I. Data from Round II indicator items are presented in Tables 24 through 28. For each indicator the mean Likert rating is presented, as well as the standard deviation, level of consensus, and number of comments. Response stability, figured as the percent of change in the distribution of responses between Rounds I and II, is reported in the *Stability* column of Table 24 through Table 28.

Round II indicators of academic excellence. Data for the 16 indicators of academic excellence in Round II are reported in Table 24. No comments were provided for any of the indicators, and only one participant made a comment in the textbox at the end of this section of the questionnaire. No new indicators were suggested by the panel relative to the indicators in Table 24. Seven of these indicators were selected from Taylor and Massy (1996) and rated by the panel in Round I. Four of these seven were

retired from the study after Round II because of response stability. Nine indicators in Table 24 were suggested by panelists in Round I. Three of these nine indicators were retired to the final list of relevant indicators (Table 37) after Round II because the panel came to consensus that these indicators were relevant.

Table 24

Round II Indicator Item Results: Academic Excellence

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Average SAT score of incoming freshmen.	3.48	0.95	34.78%	0	8.7%	Yes**
Average GRE score among graduates.	3.35	0.98	47.83%	0	21.7%	No
Percent of students enrolled in four-year programs who complete their degree in five years or less.	3.87	0.97	65.21%	0	8.7%	Yes**
Percent of graduates who enroll in graduate school within five years.	3.61	0.66	52.18%	0	23.9%	No
Book and monograph volumes in library, including those available via internet, per FTE student.	3.00	0.80	17.39%	0	17.4%	No
Percent of faculty who are part-time.	3.22	0.90	30.44%	0	8.7%	Yes**
Ratio of FTE faculty to FTE students.	3.74	0.75	65.21%	0	8.7%	Yes**
Average ACT score of incoming freshmen.*	3.65	0.93	52.17%	0	N/A	No
Percent of faculty who are part-time by department.*	3.22	0.90	39.13%	0	N/A	No

Table 24 continues

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Number of students who have qualified for nationally recognized scholarships such as Rhodes Scholars, Fulbright Scholars, or Truman Scholars.*	3.22	1.13	43.47%	0	N/A	No
Number of students accepted into the top graduate programs in their respective disciplines.*	3.65	0.83	60.87%	0	N/A	No
Percentage of graduates hired in the career field for which their program of study was intended to prepare them.*	4.09	0.60	86.96%	0	N/A	Yes
According to survey data from graduates, did their experience at our college prepare them to succeed in their given career?*	4.09	0.60	86.96%	0	N/A	Yes
According to survey data from graduates, did their degree make them more hirable in their chosen career field?*	4.04	0.56	86.96%	0	N/A	Yes
Average salary among graduates compared to national averages by field of study.*	3.35	0.65	43.48%	0	N/A	No
Fulltime faculty workload of 12 credit hours or less.*	3.04	0.98	34.78%	0	N/A	No

*indicator suggested by the panel in Round I
**retired because of stability

Round II indicators of faith and learning. The data from indicators of the integration of faith and learning are presented in Table 25. Four participants entered comments in textboxes for indicators, but no participants used the textbox at the bottom

of this page of the questionnaire. No new indicators were suggested in this section. Two of these indicators were suggested by the researcher and rated by the panel in Round I. Both of these indicators were retired after Round II, one because of stability in response data and the other because it met the criteria for relevance and consensus. The remaining three indicators in Table 25 were suggested by participants in Round I, and one of these indicators was retired after Round II because response data demonstrated consensus and relevance.

Round II indicators of spiritual formation. Round II data for nine indicators of spiritual formation are presented in Table 26. Participants provided no comments for any indicators, and only two participants entered comments in the textbox at the bottom of this page of the questionnaire. No new indicators were suggested in this section. Five of the indicators in Table 26 were suggested by the researcher and rated by participants in Round I. All five of these indicators were retired after Round II, four of them because of stability and one because it satisfied the criteria of consensus and relevance. The four remaining indicators were suggested by the panel in Round I, and one of these was retired after Round II because response data met the criteria for consensus and relevance.

Round II indicators of financial management. Data for 15 financial indicators are presented in Table 27. Five of these indicators were introduced in Round II because of comments collected in Round I. Stability data are reported for the remaining ten indicators in Table 27, all of which were selected from Taylor and Massy (1996). Five indicators were retired after Round II because of response stability. No other indicators

Table 25

Round II Indicator Item Results: Integration of Faith and Learning

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years.	4.00	0.80	78.20%	1	N/A	Yes
Number of hours of training faculty in all disciplines received in the integration of faith and learning in the last year.	3.83	0.78	69.56%	0	13.04%	Yes**
Number of faculty who led students on ministry-related trips this year.*	2.96	0.98	26.09%	1	N/A	No
Percent of faculty who are actively involved in ministry in their local church.*	3.61	1.20	60.87%	1	N/A	No
According to course evaluations completed by students, did students see the meaningful integration of faith and learning in each course?*	4.30	0.70	86.96%	0	N/A	Yes

*indicator suggested by the panel in Round I
**retired because of stability

Table 26

Round II Indicator Item Results: Spiritual Formation

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
The minimum number of times students are required to attend chapel in an academic year.	3.22	0.90	43.48%	0	13.04%	Yes**
Mean chapel attendance as a percentage of maximum possible attendance.	3.22	1.00	43.48%	0	13.04%	Yes**
Attendance at spiritual emphasis week events as a percentage of maximum possible attendance.	3.04	0.88	30.44%	0	8.69%	Yes**
Average improvement in a Bible content exam administered to students when they first arrive and again before they graduate.	3.65	0.88	65.21%	0	8.69%	Yes**
Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate.	4.00	0.80	78.26%	0	N/A	Yes
Average improvement in a Bible and doctrine exam administered to students when they first arrive and again before they graduate.*	3.74	0.96	65.22%	0	N/A	No
According to survey data from graduating students, how do they rate the effectiveness of different aspects of spiritual formation on campus (i.e., chapel, dorm devotions, Bible courses, etc.).*	3.87	0.63	73.91%	0	N/A	No

Table 26 continues

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Percentage of chapel services in a year that were not dedicated to non-chapel activities, such as interviewing student government candidates and promoting special events.*	2.48	0.90	8.7%	0	N/A	No
Percentage of students engaged in voluntary ministry.*	4.04	0.71	78.26%	0	N/A	Yes

*indicator suggested by the panel in Round I
**retired because of stability

Table 27

Round II Indicator Item Results: Financial Management

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Instructional expenditures as a percent of total current fund expenditures.	3.96	0.82	86.96%	0	8.69%	Yes**
Plant operations and maintenance expenditures as a percent of total current fund expenditures.	3.48	0.99	43.48%	0	23.9%	No
Current fund balance for this academic year as a percent of current fund balance for last academic year.	3.70	1.02	60.87%	0	8.69%	Yes**
Change in unrestricted income as a percentage of last year's unrestricted income.	3.57	0.95	56.52%	0	17.39%	No
Change in total net assets as a percentage of total net assets.	3.52	0.95	60.87%	0	17.36%	No

Table 27 continues

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Tuition and fees collected per FTE student.	3.87	0.87	78.26%	0	15.2%	No
Percent of students with institutional scholarships and fellowships.	3.74	0.92	82.61%	0	4.3%	Yes**
Instructional expenditures per FTE student.	3.87	0.87	78.26%	0	17.39%	No
Academic support expenditures as a percent of total current fund expenditures.	3.96	0.88	82.61%	0	13.04%	Yes**
End-of-year replacement value of plant as a percent of beginning-of-year replacement value of plant.	3.17	0.94	30.44%	0	8.69%	Yes**
Instructional expenditures by department as a percentage of total current fund expenditures.*	3.43	0.99	60.87%	0	N/A	No
Tuition and fees collected per FTE student by department.*	3.13	1.14	47.83%	0	N/A	No
Instructional expenditures per FTE student by department.*	3.17	1.03	34.79%	0	N/A	No
Academic support expenditures by department as a percent of total current fund expenditures.*	3.17	1.07	30.43%	0	N/A	No
The Composite Financial Index, or "CFI."*	3.74	1.01	65.22%	0	N/A	No

*indicator suggested by the panel in Round I
**retired because of stability

were retired in this section. Two participants entered comments in the textbox at the bottom of this section of the survey, and no new indicators were created for this section of Round III.

Round II indicators of development. Response data from the 12 indicators regarding development and endowment in Round II are reported in Table 28. The researcher suggested one of these indicators and the remaining 11 were selected from Taylor and Massy (1996). All of these indicators were rated by participants in Round I. Nine of these indicators were retired after Round II because of stability. No other indicators in Table 28 were retired after Round II. One participant entered a comment in the textbox at the bottom of this section of the questionnaire, and no new indicators were created for this section of Round III.

Round II indicators of students and faculty. Data from 21 indicators regarding students and faculty are presented in Table 29. Seven of these indicators were introduced in Round II because of comments and suggestions from participants in Round I. One indicator was suggested by the researcher and 13 indicators were selected from Taylor and Massy (1996). Stability data are reported for the 14 indicators that were previously rated by the panel in Round I. Three indicators in Table 29 were retired after Round II because response data satisfied the criteria for consensus and relevance, and an additional 12 indicators were retired because of response stability.

Delphi Round III data analysis and results. The 23 panelists who completed Round II were invited to participate in Round III. The invitation email for Round III was sent on April 28, 2014. The first reminder email was sent on April 30, 2014 to the 17 participants who had not completed the questionnaire. The final reminder email for Round III was sent on May 2, 2014 to the 9 panelists who had not completed the

Table 28

Round II Indicator Item Results: Development

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Gifts from alumni as a percent of total gifts.	3.87	0.92	73.91%	0	17.39%	No
Percent of living alumni who have given at any time in the past five years.	3.83	0.94	69.57%	0	13.04%	Yes**
Gifts from parents as a percent of total gifts. NOTE: this item refers to parents of current students and alumni.	3.13	0.97	30.44%	0	13.04%	Yes**
Gifts from other individuals as a percent of total gifts.	3.57	0.95	56.52%	0	8.69%	Yes**
Gifts from private foundations as a percent of total gifts.	3.74	1.05	69.57%	0	17.39%	No
Gifts from churches as a percent of total gifts.*	3.91	0.90	78.26%	0	8.69%	Yes**
Market value of endowment per FTE student.	3.61	1.08	69.56%	0	17.39%	No
Market value of endowment as a percent of total assets.	3.78	0.95	73.91%	0	8.69%	Yes**
Endowment yield as a percent of total endowment.	3.83	0.89	73.91%	0	13.04%	Yes**
Total return on endowment as a percent of total endowment.	3.70	0.88	65.21%	0	8.69%	Yes**
End of year market value of total endowment as a percent of beginning-of-year value.	3.74	0.86	69.56%	0	8.69%	Yes**
Bequests received as a percent of total gifts.	3.57	0.90	52.17%	0	8.69%	Yes**

*indicator suggested by the researcher
**retired because of stability

Table 29

Round II Indicator Item Results: Students and Faculty

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
Percent of students who are part-time.	3.48	0.67	47.83%	0	0%	Yes***
Percent of enrolled students in each class (freshmen, sophomores, juniors and seniors).	3.78	0.74	69.56%	0	8.69%	Yes***
Percent of freshman applicants who are accepted.	3.74	0.81	60.87%	0	8.69%	Yes***
Percent of total students from within the state.	3.17	0.89	30.44%	0	4.35%	Yes***
Percent of total students from outside the state.	3.13	0.81	30.44%	0	8.69%	Yes***
Percent of total students from outside the U.S.	3.13	0.92	30.44%	0	13.04%	Yes***
Percent of total FTE students who are Black, Hispanic, and Asian.	3.61	1.03	56.52%	0	8.69%	Yes***
Percent of FTE faculty who are Black, Hispanic, and Asian.	3.70	0.97	60.87%	0	21.74%	No
Percent of FTE faculty who are women.	3.57	0.95	52.17%	0	21.74%	No
Ratio of FTE faculty to FTE students in Bible or ministry related courses.*	3.43	0.84	39.13%	0	0%	Yes***
Ratio of FTE faculty to FTE students in liberal arts courses.	3.52	0.79	43.47%	0	4.35%	Yes***
Ratio of FTE faculty to FTE students in courses related to professional programs such as nursing or education.	3.61	0.89	52.17%	0	13.04%	Yes***

Table 29 continues

Indicator	Mean	SD	Consensus	Comments	Stability	Retired
This fall's faculty headcount as a percentage of faculty headcount last fall.	3.17	0.78	30.44%	0	0%	Yes***
This fall's FTE faculty as a percentage of FTE faculty last fall.	3.17	0.78	30.44%	0	0%	Yes***
Student retention as the percentage of last fall's fulltime students who re-enrolled fulltime this fall.**	4.30	0.76	91.31%	0	N/A	Yes
Student retention as the percentage of fulltime students in the fall who re-enrolled fulltime in the spring.**	4.22	0.80	86.96%	0	N/A	Yes
Number of new students who transfer in from a community college.**	3.35	0.93	39.13%	0	N/A	No
For each department: This fall's FTE enrollment as a percentage of last fall's FTE enrollment.**	3.74	0.92	60.87%	0	N/A	No
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last five years.**	4.00	0.80	78.26%	0	N/A	Yes
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last ten years.**	3.61	0.94	65.21%	0	N/A	No
The percentage of new students who come from AG churches.**	3.70	0.93	56.52%	0	N/A	No

*indicator suggested by the researcher
**indicator suggested by the panel in Round I
***retired because of stability

questionnaire. Round III was closed on May 5, 2014. A total of 14 participants completed the Round III questionnaire.

The panel suggested no new indicators in Round II. Therefore, the Round III questionnaire included no new items. A total of 47 items were retired after Round II, 37 because of response stability and 10 because the panel demonstrated consensus that these indicators were relevant. The Round III survey instrument was composed of the same two rank items as included in Rounds I and II, as well as 35 indicator items. Of the 35 indicator items, 22 were suggested by the panel in Round I and the remaining 13 indicators were selected from Taylor and Massy (1996). Response data for eight indicators demonstrated consensus and relevance in Round III. The panel also rated the feasibility of all indicators that appeared in Round III, using a five point Likert scale. Two new Likert items were included at the end of the Round III questionnaire. These items were designed by the researcher for participants to rate the usefulness of sharing indicator data among participating institutions, as well as the feasibility of creating such an indicator system among these institutions.

Round III rank items. Round III included the two rank items from Rounds I and II, in which participants ranked attributes of their institutions. A table was included for each of these items so participants could see response data from Round II. In these tables statements were ordered by mean rank from Round II. The tables also displayed the mean rank from Round II, as well as the percentage of participants who ranked each statement as it was ranked on the table. In addition, the tables displayed to each participant the rank he or she had given statements in Round II.

Round II data from the two rank items are reported in Tables 30 and 31. In both tables, the rank order of statements according to their mean ranking by panelists is presented in the *Rank* column. The mean rank for each statement is presented in the *Mean* column. The *Percentage* column displays the percent of participants who ranked statements as they are ordered in the *Rank* column.

Table 30

Round III Rank Item Results: Mission Pursuit

	Round II			Round III		
Attribute	Rank	Mean	Percentage	Rank	Mean	Percentage
Commitment to the spiritual formation of students	1	1.78	60.87%	1	1.57	71.43%
Academic quality	2	2.09	47.83%	2	2.07	71.43%
Quality and productivity of personnel	3	4.17	26.09%	3	3.07	71.43%
Affordability	4	5.00	17.39%	4	4.57	35.71%
Job preparation of students	5	5.87	8.7%	5	5.14	21.43%
Management of financial resources	6	6.09	17.39%	6	6.14	21.43%
Wide selection of majors	7	6.43	13.04%	7	7.00	21.43%
Student development programs	8	6.48	21.74%	8	7.21	42.86%
Condition of facilities	9	7.52	30.43%	9	8.29	50.00%
Athletic programs	10	9.57	82.61%	10	9.93	92.86%

Table 31

Round III Rank Item Results: Spiritual Formation

	Round II			Round III		
Attribute	Rank	Mean	Percentage	Rank	Mean	Percentage
Integration of faith and learning	1	1.70	69.57%	1	1.14	85.71%
Required Bible and theology courses in all majors	2	2.52	34.78%	2	2.50	42.86%
Chapel services	3	3.26	30.43%	3	3.79	28.57%
Student led ministry, including dorm life	4	4.04	30.43%	4	3.86	35.71%
AG affiliation of faculty	5	4.52	30.43%	5	4.43	42.86%
Spiritual emphasis week	6	5.96	39.13%	6	6.00	57.14%
Enforced moral code on campus	7	6.00	60.87%	7	6.29	71.43%

Data from the rank item in which participants rank attributes of their institution according to their importance to institutional mission are reported in Table 30. Data from Round II are included for the purpose of comparison. Although the rank order of attributes did not change between Round II and Round III, the percentage of agreement increased for all items. The three top ranked attributes, *Commitment to the spiritual formation of students*, *Academic quality*, and *Quality and productivity of personnel*, each had 71.43% of participants agree on their ranking.

Data from the rank item in which participants ranked institutional attributes according to the potential they have to contribute to the spiritual formation of students are reported in Table 31. Data from Round II are included in order to compare response data

with Round III. The rank order did not change between rounds, but the percentage of agreement in rankings increased for all attributes except one. *Integration of faith and learning* was by far the favorite attribute of the panel, receiving the rank of 1 by 85.71% of participants.

Round III indicator items. Data from strategic indicators rated by the panel in Round III are reported in Tables 32 through 34. For each indicator the mean rating, standard deviation, consensus, and number of comments are reported. Indicators whose data met the criteria for consensus and relevance are identified in the *Retired* column. The panel rated the feasibility of indicators presented in Round III using a five point Likert scale. Feasibility refers to how easily data for an indicator could be collected and monitored. The mean feasibility rating for each indicator is presented.

Round III indicators of academic excellence. The data from nine indicators of academic excellence are presented in Table 32. Three of these indicators were selected from Taylor and Massy (1996), and six were suggested by the panel in Round I. The Panel did not come to consensus on the relevance of any indicators in Table 32. Participants did not provide comments for any of these indicators, and the textbox at the end of this section of the questionnaire was only used by one participant.

Round III indicators of spiritual formation and integration. Indicators regarding spiritual formation and the integration of faith and learning were combined in one section of the Round III instrument, simply because of the small number of these indicators remaining in the study. The data for these seven indicators, all of which were

Table 32

Round III Indicator Item Results: Academic Excellence

Indicator	Mean	SD	Consensus	Retired	Feasibility
Average GRE score among graduates.	3.36	1.01	35.72%	No	3.86
Percent of graduates who enroll in graduate school within five years.	3.79	0.70	64.29%	No	2.93
Book and monograph volumes in library, including those available via internet, per FTE student.	3.00	0.88	28.57%	No	4.14
Average ACT score of incoming freshmen.*	3.71	0.73	57.15%	No	4.29
Percent of faculty who are part-time by department.*	3.50	1.02	42.86%	No	4.36
Number of students who have qualified for nationally recognized scholarships such as Rhodes Scholars, Fulbright Scholars, or Truman Scholars.*	3.14	1.17	35.72%	No	3.71
Number of students accepted into the top graduate programs in their respective disciplines.*	3.71	0.61	64.28%	No	3.00
Average salary among graduates compared to national averages by field of study.*	3.43	0.51	42.86%	No	2.43
Fulltime faculty workload of 12 credit hours or less.*	3.36	1.08	42.86%	No	4.07

*indicator suggested by the panel in Round I

Table 33

Round III Indicator Item Results: Spiritual Formation and Integration of Faith and Learning

Indicator	Mean	SD	Consensus	Retired	Feasibility
Percentage of chapel services in a year that were not dedicated to non-chapel activities, such as interviewing student government candidates and promoting special events.	2.64	0.93	14.29%	No	3.79
Average improvement in a Bible and doctrine exam administered to students when they first arrive and again before they graduate.	3.79	0.80	57.14%	No	3.86
Number of faculty who led students on ministry-related trips this year.	3.00	0.68	21.43%	No	3.79
Percent of faculty who are actively involved in ministry in their local church.	3.71	0.91	57.14%	No	3.43
According to survey data from graduating students, how do they rate the effectiveness of different aspects of spiritual formation on campus (i.e., chapel, dorm devotions, Bible courses, etc.).	3.93	0.73	71.43%	No	3.36
Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith.	4.00	0.68	78.57%	Yes	3.71
Percentage of faculty who have written on the integration of faith and learning as it relates to their discipline. These writings may be for publication or for use within the college.	3.21	0.97	42.85%	No	3.71

Table 34

Round III Indicator Item Results: Financial Management

Indicator	Mean	SD	Consensus	Retired	Feasibility
Plant operations and maintenance expenditures as a percent of total current fund expenditures.	3.57	0.76	42.86%	No	3.71
Change in unrestricted income as a percentage of last year's unrestricted income.	3.64	0.84	57.15%	No	3.86
Change in total net assets as a percentage of total net assets.	3.79	0.80	71.43%	No	3.86
Tuition and fees collected per FTE student.	4.07	0.47	92.86%	Yes	4.14
Instructional expenditures per FTE student.	4.07	0.62	85.72%	Yes	3.93
Instructional expenditures by department as a percentage of total current fund expenditures.*	3.79	0.58	71.43%	No	3.50
Tuition and fees collected per FTE student by department.*	3.57	0.94	64.28%	No	3.79
Instructional expenditures per FTE student by department.*	3.57	0.76	57.14%	No	3.43
Academic support expenditures by department as a percent of total current fund expenditures.*	3.36	0.74	35.71%	No	3.71
The Composite Financial Index, or "CFI."*	4.07	0.73	78.57%	Yes	4.07

*indicator suggested by the panel in Round I

Table 35

Round III Indicator Item Results: Development, Students, and Faculty

Indicator	Mean	SD	Consensus	Retired	Feasibility
Percent of FTE faculty who are Black, Hispanic, and Asian.	3.79	0.89	64.29%	No	4.07
Percent of FTE faculty who are women.	3.71	0.83	64.29%	No	4.50
Market value of endowment per FTE student.	3.86	1.03	78.57%	No	4.14
Gifts from private foundations as a percent of total gifts.	4.00	0.68	78.57%	Yes	3.93
Gifts from alumni as a percent of total gifts.	4.14	0.66	85.71%	Yes	3.86
Number of new students who transfer in from a community college.*	3.64	0.74	50.00%	No	3.93
For each department: This fall's FTE enrollment as a percentage of last fall's FTE enrollment.*	4.00	0.55	85.72%	Yes	4.29
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last ten years.*	3.71	0.61	78.57%	No	4.21
The percentage of new students who come from AG churches.*	4.00	0.78	71.43%	Yes	3.71

*indicator suggested by the panel in Round I

suggested by the panel in Round I, are reported in Table 33. The panel came to consensus regarding the relevance of only one of these indicators. This indicator was related to the integration of faith and learning. No comments were provided by panelists in this section of the survey.

Round III indicators of financial management. Data from the ten indicators for financial management in Round III are presented in Table 34. Five of these indicators

were selected from Taylor and Massy (1996) and the remaining five indicators were suggested by the panel in Round I. The panel reached consensus on the relevance of three indicators in Table 34. Panelist suggested no comments for any indicators, and no comments were provided in the textbox at the end of this section of the questionnaire.

Round III indicators of development, students, and faculty. Indicators for development and for students and faculty were combined in one section of the Round III questionnaire because there were only nine of these indicators remaining. Data from these indicator items are reported in Table 35. Five of these indicators were selected from Taylor and Massy (1996), and four were suggested by the panel in Round I. Panelists provided no comments for these indicators in Round III, and no comments were provided in the textbox at the end of this section. The panel came to consensus that four indicators in Table 35 were relevant.

Round III statement items. Two new items were included in Round III to collect data regarding the usefulness and feasibility of developing an indicator system for the purpose of data sharing among participating institutions. Each item is a statement, and participants used a five point Likert scale to report how strongly they agree or disagree with each statement. On the questionnaire, these items follow a paragraph which briefly explains how indicator data are shared in a peer group system. The mean Likert response, standard deviation, and level of consensus for these items are reported in Table 36. Participants responded positively to the statement item asking if their institutions would benefit from a peer group indicator system. Response data to the

Table 36

Round III Statement Item Results

Item	Mean	SD	Consensus
To what extent do you agree or disagree that this kind of indicator data sharing could be useful to academic leaders at Assemblies of God colleges?	4.29	0.61	92.86%
To what extent do you agree or disagree that a system of indicator data sharing could be established among Assemblies of God colleges?	3.76	0.58	85.71%

statement item asking if indicator data sharing could be implemented among Assemblies of God colleges was also favorable, but with a lower mean rating and reduced level of consensus. Comments were provided by five panelists in the textbox following these two items on the questionnaire. All comments reported that a peer group indicator system would be useful, so long as the indicators were truly relevant and figured in the same manner at each institution. Two participants commented that if all 12 Assemblies of God colleges were included in the same peer group each indicator may not have the same importance at each institution because of differences in mission and size. Two panelists suggested that some institutions may not wish to share indicator data because such data may cast them in a negative light.

Final Set of Strategic Indicators

The final list of strategic indicators is presented in Table 37. These indicators were selected according to consensus among panelists that these indicators were relevant to participating institutions. The mean feasibility rating is reported along with the round

Table 37

Final List of Strategic Indicators Selected by the Panel

	Round Retired (Feasibility)	Source	Data
Indicators of Academic Excellence			
Percent of faculty who hold terminal degrees.	Round I	Taylor and Massy	Office of Academic Affaires
Percentage of graduates hired in the career field for which their program of study was intended to prepare them.	Round II	Panel	Survey of Alumni
According to survey data from graduates, did their experience at our college prepare them to succeed in their given career?	Round II	Panel	Survey of Alumni
According to survey data from graduates, did their degree make them more hirable in their chosen career field?	Round II	Panel	Survey of Alumni
Indicators of the Integration of Faith and Learning			
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years.	Round II	Researcher	Survey of Faculty/ Office of Academic Affaires
According to course evaluations completed by students, did students see the meaningful integration of faith and learning in each course?	Round II	Panel	Course Evaluations
Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith.	Round III (3.71)	Panel	Office of Academic Affaires
Indicators of Spiritual Formation			
Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate.	Round II	Researcher	Survey of Students

Table 37 continues

	Round Retired (Feasibility)	Source	Data
Percentage of students engaged in voluntary ministry.	Round II	Panel	Survey of Students
Indicators of Financial Management			
Excess (deficit) of current fund revenues over current fund expenditures.	Round I	Taylor and Massy	DOE
Long-term debt as a percent of total liabilities.	Round I	Taylor and Massy	DOE/AAGHE
Total assets as a percent of total liabilities.	Round I	Taylor and Massy	DOE
Institutional scholarships and discounts as a percent of total tuition and fee income.	Round I	Taylor and Massy	DOE/AAGHE
Tuition and fees as a percent of total current fund revenues.	Round I	Taylor and Massy	DOE/AAGHE
Tuition and fees collected per FTE student.	Round III (4.14)	Taylor and Massy	DOE/AAGHE
Instructional expenditures per FTE student.	Round III (3.93)	Taylor and Massy	DOE/AAGHE
The Composite Financial Index, or "CFI."	Round III (4.07)	Panel	DOE
Indicators of Development			
Gifts and grants as a percent of total current fund revenues.	Round I	Taylor and Massy	IRS/AAGHE
Gifts from private foundations as a percent of total gifts.	Round III (3.93)	Taylor and Massy	IRS
Gifts from alumni as a percent of total gifts.	Round III (3.86)	Taylor and Massy	IRS
Indicators of Students and Faculty			
This fall's total FTE students as a percent of last fall's FTE students.	Round I	Taylor and Massy	DOE/AAGHE

Table 37 continues

	Round Retired (Feasibility)	Source	Data
Percent of accepted freshman who matriculate.	Round I	Taylor and Massy	DOE/AAGHE
Degrees awarded as a percent of FTE enrollment.	Round I	Taylor and Massy	DOE/AAGHE
Student retention as the percentage of last fall's fulltime students who re-enrolled fulltime this fall.	Round II	Panel	DOE/AAGHE
Student retention as the percentage of fulltime students in the fall who re-enrolled fulltime in the spring.	Round II	Panel	DOE/AAGHE
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last five years.	Round II	Panel	DOE/AAGHE
For each department: This fall's FTE enrollment as a percentage of last fall's FTE enrollment.	Round III (4.29)	Panel	DOE/AAGHE
The percentage of new students who come from AG churches.	Round III (3.71)	Panel	AAGHE

in which each indicator was retired, although feasibility was only rated for indicators included in the final list after Round III. Mean feasibility appears in parenthesis, and is reported in the *Round Retired* column. Indicators that were selected from Taylor and Massy (1996), suggested by the researcher, or suggested by the panel are identified as such in the *Source* column. Different agencies require participating institutions to collect data for indicators: Internal Revenue Service, Department of Education, and the AAGHE. The agency or agencies that require data for each indicator are presented in the *Data* column. If data for an indicator are not required for an agency a possible means by which data may be collected for that indicator is suggested: Office of academic affairs; survey data from alumni, faculty, or students; and course evaluations. All indicators in

Table 37 may also be monitored as part of the accreditation process, provided that institutions regularly monitor data between accreditation years.

Summary

The researcher reported data collected during the three round Delphi study in Chapter IV. The survey instrument for all three rounds included two items in which participants ranked attributes of their institution. Data from these items indicate that the spiritual formation of students is the most important attribute concerning the pursuit of the institutional mission, and that the integration of faith and learning is the most important aspect of the spiritual formation of students. The panel came to consensus that a total of 28 indicators are relevant for use at their institutions. Of these indicators, 14 were selected from Taylor and Massy (1996), two were suggested by the researcher, and 12 were suggested by the panel.

The panel indicated that participating institutions would benefit from sharing indicator data. Although the panel was optimistic that such a peer group indicator system could be created, two panelists commented that some participating institutions may not wish to share indicator data. Data for most indicators is not difficult to collect, and is already on hand for many indicators. This is reflected in the predominance of high feasibility ratings for indicators in Round III.

Chapter V

Discussion

In this chapter the findings of the three round Delphi study are summarized and discussed, as well as implications these findings suggest for practice and for future research. The institutional attributes that panelists selected as the most important to strategic position are also discussed, and the indicators the panel identified to report on these attributes. Feedback from the panel regarding the feasibility of implementing a data sharing peer group among Assemblies of God colleges is also examined.

Discussion of Results

Institutions can create their own indicator systems by selecting indicators that are already present in the literature, such as Taylor et al. (1991) and Taylor and Massy (1996). In addition, Taylor and Massy suggested that institutions identify their own indicators that are sensitive to institutional identity. In this study, panelists selected a total of 28 indicators (Table 37). Of these indicators, 14 were selected from Taylor and Massy (1996), two were suggested by the researcher, and 12 were suggested by the panel. Panelists identified the spiritual formation of students as the most important attribute of participating institutions, and the integration of faith and learning as the main contributor to spiritual formation. This study led the panel in the selection of five indicators for spiritual formation and for faith and learning that did not previously exist in the literature.

Spiritual formation. The importance of chapel services to the spiritual formation of students was surprisingly low in survey data. The statement item *To what extent do you agree that chapel services are the heart of spiritual life on campus* was retired after

Round II because responses had reached stability, and without a high level of agreement with the statement. Additionally, indicators related to chapel and improved Bible knowledge did not attain the required levels of consensus or relevance. Comments for these indicators reported that these indicators are poor measures of spirituality because they measure exposure to spiritual things and not increased spirituality on the part of students. The two indicators that were selected by the panel reflect increased spiritual engagement by students:

- *Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate*.
- *Percentage of students engaged in voluntary ministry*.

The integration of faith and learning. The integration of faith and learning was ranked by the panel as the main contributor to the spiritual formation of students. The requirement of Bible and theology courses for students in all majors was ranked the second most important contributor to spiritual formation. This may have been in part because participants saw required Bible and theology courses as an important part of the integration of faith and learning, as described in Benne (2001). Overall, feedback from the panel indicated that the concept of faith and learning remained difficult to articulate, especially when applied across all disciplines. Moreover, the panel did not agree that faculty in all disciplines were adequately prepared by their institutions to integrate faith and learning in the classroom (Table 21). However, the panel did agree that the integration of faith and learning should be apparent in the content of courses in all fields

of study, even if unclear as to how faith should integrate into course content. The indicators selected by the panel reflect their belief that all courses should integrate faith:

- *Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith*.
- *According to course evaluations completed by students, did students see the meaningful integration of faith and learning in each course*?
- *Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years*.

Feasibility of indicators. As discussed in the literature review, most indicator data are readily available in higher education because of reports institutions provide to governments, accreditation agencies, associations, and even donors. This is reflected in feasibility data reported for indicators in Round III. The mean feasibility rating for all indicators in Round III was high, 3.8. Hence, the use of indicators has much more to do with selecting indicators and regularly using them, rather than the feasibility of collecting indicator data.

Indicators that require data from alumni are more difficult to implement because graduates are no longer on campus. The ease with which data could be collected from alumni depends on whether or not an alumni survey is already in use at the institution. If so, survey items collecting indicator data can simply be added to the alumni survey. Three indicators in the final list of strategic indicators require data collection from alumni:

- *Percentage of graduates hired in the career field for which their program of study was intended to prepare them.*
- *According to survey data from graduates, did their experience at our college prepare them to succeed in their given career?*
- *According to survey data from graduates, did their degree make them more hirable in their chosen career field?*

The feasibility of four items that require data from alumni was rated by the panel in Round III. The mean feasibility rating for these four indicators was 3.06, much lower than the mean rating for all indicators of 3.8.

- *Average GRE score among graduates.*
- *Percent of graduates who enroll in graduate school within five years.*
- *Average salary among graduates compared to national averages by field of study.*
- *Number of students accepted into the top graduate programs in their respective disciplines.*

Implications for Practice

The indicators identified in this study were selected by expert panelists on the basis of how well they reflect the institutional identity and strategic position of participating institutions. Therefore, these indicators are suitable for use at any one of these institutions to monitor trends over time, or to compare data among institutions.

Use of the selected indicators. Academic leaders at participating institutions can rely on this indicator system to provide data to guide the creation of strategies, as well as

the effective monitoring of progress towards goals (Morrill, 2007). Leaders can also use these indicators to detect negative trends and anticipate shocks to their institution (Sapp, 1994). Because this set of indicators is built around the commonalities in the missions of participating institutions, these indicators can help academic leaders monitor against mission drift (Taylor & Massy, 1996).

A set of less than 30 indicators, such as the set of indicators identified in the current research, can provide a concise and general report of an institution's strategic position (McLaughlin & McLaughlin, 2007; Morrill, 2007). This number of indicators would be most suitable for trustees or a central planning committee, but senior administrators may wish to monitor triple this number of indicators (Morrill, 2007). This set of 28 indicators is also well suited for data sharing in a comparative group, in that such groups tend to select fewer indicators for data sharing than individual institutions select to monitor trends within their own institution (McLaughlin & McLaughlin, 2007; Ruben, 2004). Comparative group indicator systems include fewer indicators because member institutions tend to agree on a reduced number of indicators that are important to the group (Secor, 2002; Teeter & Brinkman, 2003). Finally, these indicators are suited for data sharing among participating institutions because they were selected by a panel of experts from these institutions.

Peer group comparison of indicator data. The six institutions which were invited to participate in this study constitute a set of institutions which could rightly be considered peers because of their similar institutional missions and history, as well as the criteria of size, cost of tuition, and presence of a graduate program discussed in Chapter

III. As the panel pointed out, not all 12 accredited Assemblies of God colleges are as similar as the five that participated in this study. Panelists cited differences in the size of enrollment and institutional mission as the main differences among Assemblies of God colleges. However, these differences are not significant to the sharing of indicator data for several reasons. First, for the purpose of sharing indicator data, enrollment is not the most important similarity that can exist among institutions. Indeed, enrollment size was never used in either of the institutional classification systems developed by Taylor et al. (1991) and Taylor and Massy (1996). Moreover, Assemblies of God colleges are all relatively small. The largest of these institutions has a total headcount enrollment of 2,703 (AAGHE, 2014). Second, despite differences that do exist in the mission statements of Assemblies of God colleges, their missions are all essentially the same. This is due to the criteria for institutional missions established by the AAGHE (2010) which states that the mission of all endorsed colleges must include the following criteria:

1. The integration of faith and learning
2. The formation of mature Christian character and spiritual life
3. The inculcation of a strong, fervent interest in the goal of world evangelism
4. The commitment to ethnic and gender diversity while preparing students for leadership and ministry in a diverse and globally interdependent world
5. The development of loyalty to the doctrines and principles of the Assemblies of God
6. The preparation of leaders for the Kingdom of God and the Assemblies of God. (p. 2)

If all 12 Assemblies of God colleges shared indicator data, they would function as a predetermined comparative group. This is because member institutions would be part

of the comparative group simply because they are associated with the Assemblies of God. Teeter and Brinkman (2003) warn that member institutions of a predetermined group may not necessarily be peers in terms of their size, history, mission, strategies, and goals. However, these differences are not significant among the 12 accredited Assemblies of God institutions, in that they are small colleges with very similar missions and strong ties to the same denomination. Even in predetermined comparative groups where these differences are significant, the sharing of indicator data is still useful. These groups can identify indicators that are relevant to all member institutions, and not all indicators have to be equally important to each institution (Teeter & Brinkman, 2003; Ruben, 2004; Secor, 2002).

A comparative group that includes all 12 Assemblies of God colleges may serve as an aspiration group for some member institutions. The goal of an aspiration group is to compare data with institutions that represent what the home institution wants to become in the future (McLaughlin & McLaughlin, 2007). Creating such a group establishes a specific context and rational means for setting goals, objectives, and strategic planning (p. 78). In such a group, Assemblies of God colleges that are smaller and less financially stable would benefit from comparing data with larger, more stable member institutions.

The panel mentioned that some Assemblies of God institutions may not wish to share data because of concern they have for their image. This concern clearly stems from a misunderstanding of how indicator data are shared and used, and the fear of being ranked. The purpose of comparison is simply for individual institutions to have an

assessment of their strategic position, by giving decision makers an idea of how their institution is faring in relation to similar institutions. A comparative group among Assemblies of God colleges would not be interested in ranking institutions according to their performance, or even publishing indicator data from individual institutions. Group data could simply be averaged so that individual institutions can compare their own data to the group average, as suggested in Taylor et al. (1991) and Taylor and Massy (1996).

Suggestions for Future Research

In light of the results of the this research, the following suggestions are offered by the researcher to guide future research regarding strategic indicators at Assemblies of God colleges and other religiously affiliated institutions.

Spiritual formation. The spiritual formation of students is part of the mission of many religiously affiliated colleges and universities. However, very few of these institutions have indicators to report on increased spirituality among students. This research identified two indicators of spiritual formation, but many more could be identified if panelists shared a more unified understanding of the goals and measures of spiritual formation. A panel that shares an understanding of how spiritual formation can be measured is the starting point for the selection of these indicators. Therefore, future research should identify how student spirituality can be measured at institutions. Findings suggest that indicators of spiritual formation will focus on increased spiritual engagement among students, rather than the institution's efforts to increase the spiritual engagement of students.

Integration of faith and learning. The integration of faith and learning is central to the mission of Assemblies of God colleges, as well as many other religiously affiliated institutions. Panelist comments conveyed the lack of a universally accepted definition of the integration of faith and learning, and what integration means in different fields of study. Although this study identified two indicators of the integration of faith and learning, more could be identified if panelists shared a clear definition of what integration is. Findings from this research suggest that future research should seek consensus on what the integration of faith of learning means, especially concerning course content in nonreligious fields of study.

Indicators for individual institutions. Participating institutions that develop their own sets of indicators will add a significant number of indicators to the set of 28 selected in this study. Moreover, the indicators identified in this study were for the purpose of sharing data in a peer group. Participating institutions have very similar missions, are roughly the same size, and work in similar contexts. However, they do not have identical missions, aspirations for the future, and they are located in various regions across the United States. These differences would be reflected in the selection of their own indicators. Future research will have to be carried out to develop indicator systems at the institution level.

Summary of Findings

The purpose of this study was to select strategic indicators suitable for determining the strategic position of Assemblies of God colleges. The resulting set of indicators can be used to monitor trends over time at the same institution, as well as

provide data that can be compared among Assemblies of God colleges as a peer group of institutions. Participants were selected from administrators, faculty, and trustees at the five participating Assemblies of God colleges. This Delphi study was composed of three rounds, and 54% of participants completed Round III. In each round participants provided Likert ratings for the relevance of indicators. Round I began with 51 indicators selected from Taylor and Massy (1996) and 9 indicators created by the researcher. Panelists suggested an additional 32 indicators in Round I, and the relevance of these indicators was rated by the panel in subsequent rounds. The panel reached consensus that 28 indicators were relevant to their institutions, and these are the indicators which compose the final set of strategic indicators presented in Table 37.

The panel responded that commitment to the spiritual formation of students was the most important institutional attribute to strategic positioning at their institutions, and that academic excellence was the second most important attribute (Table 37). The priority of spiritual formation was also demonstrated in the panel's response to the statement item: *To what extent do you agree that students choose to attend your institution because of the spiritual formation you offer them.* This item was retired after Round I because the panel reached 92% consensus and gave this statement a mean Likert rating of 4.54, which was the most favorable response the panel gave to any item in the entire survey. This item also informed on why spiritual formation was so important to strategic positioning: Panelists assumed spiritual formation was an institutional attribute that attracted students.

The integration of faith and learning was also important to panelists, in that it was an important contributor to the spiritual formation of students. In the rank item in which the panel ordered institutional attributes by importance to spiritual formation, *The integration of faith and learning* was ranked 1 in all three rounds, and with 85.71% agreement in Round III. The panel also agreed that the integration of faith and learning represented an important contribution to academic excellence at their institutions. The statement item *To what extent do you agree that the integration of faith and learning is the greatest academic advantage that your college offers students* was retired by the panel after the first round, with 81% consensus and a mean Likert rating of 4.27.

This Delphi study was guided by four research question. A summary of results for each of these four research questions is provided below.

Research Question 1. What aspects of the institution (i.e., finance, student life, academics, etc.) are the most important to strategic positioning at Assemblies of God colleges?

Research question 1 results. Panelists responded that the following attributes are the most important to strategic positioning at their institutions:

- The spiritual formation of students;
- Academic quality;
- The integration of faith and learning.

According to the panel, the spiritual formation of students was the most important attribute of participating institutions. In the first rank item, the panel ranked a list of ten institutional attributes in order of importance to mission pursuit. In all three rounds

Commitment to the spiritual formation of students and *Academic quality* were ranked 1 and 2, respectively. In the second rank item, panelists ranked institutional attributes by importance to the spiritual formation of students. In this item *The integration of faith and learning* was ranked 1 in all three rounds.

Research Question 2. What indicators are the most relevant for reporting on these selected aspects of the institution?

Research question 2 results. The panel reached consensus on a total of 28 indicators, of these indicators 9 related directly to the institutional aspects identified in research question 1: Spiritual formation of students, academic quality, and the integration of faith and learning (Table 37). Response data from the panel indicated that:

- The spiritual formation of students was the most important aspect of institutional life at Assemblies of God colleges. A total of nine indicators of spiritual formation were considered by the panel, but data from only two indicators satisfied the standards of consensus and relevance.
- Academic quality was identified as the second most important attribute of participating institutions. Seventeen indicators of academic quality were rated by the panel, which reached consensus that 7 of these 17 indicators were relevant.
- The integration of faith and learning was the most important aspect of spiritual formation. Seven indicators of the integration of faith and learning were rated by the panel, but consensus was reached for only two of these indicators.

Research Question 3. Which of the indicators suggested by Taylor and Massy (1996) are useful to Assemblies of God colleges?

Research question 3 results. For the Round I questionnaire, the researcher preselected 51 indicators from Taylor and Massy (1996). Table 37 identifies the 14 Taylor and Massy indicators that met the criteria of consensus and relevance.

Research Question 4. How readily can indicators identified in research questions 2 and 3 be compared across institutions?

Research question 4 results. The majority of panelists agreed that data sharing could readily occur among institutions, and that data collection for indicators would be possible.

- The Round III statement item asking if indicator data sharing could be useful to Assemblies of God colleges was given a mean rating of 4.29, with 92.86% consensus (Table 36).
- The Round III statement item asking if indicator data sharing could be established among Assemblies of God colleges was given a mean rating of 3.76, with 85.71% consensus (Table 36).
- Panelists gave high feasibility ratings to indicator items in Round III, implying that the collection of data for these indicators would not be difficult (Table 37).

Although the panel seemed confident that data sharing could occur, two panelists commented that not all institutions may be willing to share indicator data. The reason both of these panelists gave for institutions to not participate was that publicizing data

may affect the image of the institution. One panelist commented that not all 12 Assemblies of God colleges are as similar in size and mission as the institutions which participated in the present research.

Conclusion

In the modern higher education context, most religiously affiliated institutions are at a significant disadvantage. Their income is heavily reliant on tuition paid by students, and they cost far more to attend than public institutions. Religiously affiliated colleges and universities can only secure their place in this environment if they remain focused on their respective missions. The mission is what distinguishes the institution from all others and guides the strategies designed by decision makers (Taylor & Massy, 1996; Townsley, 2009). In order to create and implement effective strategies in higher education, decision makers must have timely and accurate information on key strategic values (Taylor & Massy, 1996). The use of strategic indicators is an effective means by which decision makers can have regular access to this information.

The purpose of this three round Delphi study was to identify strategic indicators for Assemblies of God colleges. Academic leaders from five Assemblies of God colleges participated in this study, which selected 28 indicators. Of the indicators selected by the panel, 14 were among those suggested by Taylor and Massy (1996). Two selected indicators were suggested by the researcher, and 12 selected indicators were suggested by the panel. Participants responded positively that a peer group indicator system could be established among assemblies of God colleges. Moreover, data for 19 selected indicators are already collected and reported to government agencies and the AAGHE. The

feasibility of data collection for these indicators was reflected in response data from the panel in Round III, in which they rated the feasibility of indicators.

The set of indicators identified by the present research can be used to monitor trends over time at any single participating institution. However, this set of indicators is best suited to provide comparative data from participating institutions, sharing data as a group of peer institutions. This is because of the relatively small number of indicators selected, and the fact that they were selected by a panel of experts from the five participating institutions. The set of 28 indicators selected by the panel can also be used for data sharing by all 12 Assemblies of God colleges, functioning as a predetermined peer group. Participants reported that Assemblies of God colleges would benefit from sharing indicator data with each other, and that such a data sharing program could be established among these institutions. However, two participants reported that some institutions may be reluctant to share more data than they already report because it may have a negative effect on their image.

The mission of the participating institutions is built around the spiritual formation of students and the integration of faith and learning. Indicators for the spiritual formation of students and for the integration of faith and learning proved to be the most difficult for the panel to identify. This may stem from the fact that definitions and measures for these concepts are difficult to articulate. Future research could identify more indicators for these concepts, but would have to start by establishing definitions for these concepts that are universally accepted by participants. This would be a worthy undertaking, in that the

concepts of spiritual formation and the integration of faith and learning are central to the mission of participating institutions.

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Appendix A

Request for Institutional Approval Letters

Dear J. Doe,

My name is Bryan Davis and I am an AGWM missionary to Senegal. I am writing to ask your help with a study designed to benefit Assemblies of God higher education. Your institution is one of six assemblies of God colleges that were handpicked for this study, which is the focus of my doctoral dissertation at the University of Nebraska-Lincoln.

This study will use a series of online questionnaires to collect data from academic leaders at institutions such as yours. The goal of this study is to create a dashboard of indicators that inform on institutional health and mission cohesion at Assemblies of God colleges. These indicators reflect data on selected processes and outcomes that provide academic leaders the best snapshot of their institution's current condition and trajectory for the future. While indicator dashboards have been developed at different levels in public higher education, far fewer private institutions have developed their own dashboards. To my knowledge, this study will be the first time a peer group of Christian colleges has developed a set of dashboard indicators.

For the purpose of this study, a panel will be created from leaders at participating Assemblies of God colleges. Using a series of online questionnaires, panelists will create their own dashboard of indicators tailored for use at Assemblies of God colleges. From each participating institution panelists will include the president, chief academic officer, and chief business officer. The remaining panelists will be selected by the office of The Alliance for the Assemblies of God Higher Education, and will include an additional senior administrator, two faculty members, and two trustees from each participating institution. The first online questionnaire will be made available to participants in early January of 2014.

To participate in this study, please email me at the address below and I will send you instructions on how we can get started.

Thank you for your consideration of this matter. Your help will make a valuable contribution to Assemblies of God higher education.

Many Thanks,
C. Bryan Davis
sandfromsenegal@yahoo.com

Appendix B

Delphi Round I: Certification of IRB Exemption Status

March 25, 2014

Charles Davis
Department of Educational Administration
17304 Emiline St Omaha, NE 68136

Brent Cejda
Department of Educational Administration
141C TEAC, UNL, 68588-0360

IRB Number: 20140313982 EX
Project ID: 13982
Project Title: Strategic Indicators for Assemblies of God Colleges

Dear Charles:

This letter is to officially notify you of the certification of exemption of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as Exempt Category 2.

You are authorized to implement this study as of the Date of Exemption Determination: 03/25/2014.

1. Since your informed consent form will appear on-line, please include the IRB approval number (IRB#20140313982 EX) in the informed consent document. Please email a copy of the document to me, with the number included. If you need to make changes to the informed consent document, please submit the revised document to the IRB for review and approval prior to using it.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;

* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Becky R. Freeman, CIP
for the IRB

Appendix C

Delphi Round I: Online IRB Informed Consent Document

Informed Consent Form IRB #___20140313982 EX___

Strategic Indicators at Assemblies of God Colleges

This is a research project designed to create a dashboard of strategic indicators that would be useful to Assemblies of God colleges. Strategic indicators are useful to decision makers because they report on institutional health and mission cohesion. This dashboard will be created by a panel of veteran leaders at selected Assemblies of God colleges. For the purpose of this study, you were personally identified as a veteran leader by the Alliance for Assemblies of God Higher Education. After the study is completed, a copy of the dashboard of indicators the panel creates will be emailed to the Alliance for Assemblies of God Higher Education. All that is required to participate in this study is the completion of a series of three online questionnaires. The first questionnaire is the longest, taking about 20 minutes to complete. The following questionnaires become successively shorter and are composed of the same questions as the first questionnaire. The second and third questionnaires simply give you the opportunity to revise your responses to questions on the survey in light of the average response to each question.

The online questionnaires and the data they collect will all be maintained on the Qualtrics server, where only I will have secured access. I will personally analyze responses to all the questionnaires, and no information you provide will ever be shared with anyone else in a way that will associate you with your responses. Data will be stored in such a way that questionnaire responses can be associated with participants, but only as long as needed for the purpose of preparing my dissertation. After a period of one year data will no longer be stored in a way that associates questionnaire responses with the names of participants. When the results of this study are written in my dissertation, or if results are presented or published elsewhere, individual responses will never be associated with individual participants. There are no known risks or discomforts associated with this research.

I know that your time is important to you, which is why I so appreciate your participation in this survey. As a token of my appreciation, I will send you a Starbucks e-gift certificate for $5 after the study is complete. Your help will benefit the scholarly understanding of Christian higher education. Your participation will also enrich organizational life at Assemblies of God colleges, which will benefit from the creation of dashboard indicators.

The principle investigator, C. Bryan Davis, is conducting this survey for the preparation of a doctoral dissertation at the University of Nebraska-Lincoln. The results of this study may also be published in a scholarly journal.

You are free to ask questions about this survey at any time, even before you agree to participate. You may contact the principle investigator, Bryan Davis, by email at

sandfromsenegal@yahoo.com. The secondary researcher, Dr. Brent Cejda, is also available for questions by email at bcejda2@unl.edu or by phone at (402) 472-0989. If you would like to speak to someone else, please call the Research Compliance Services Office at 402-472-6965 or contact them by email at irb@unl.edu.

You are free to not participate in this survey. Your decision to not participate will in no way affect your relationship with the investigator, the Assemblies of God college with which you are associated, or the University of Nebraska-Lincoln. Your decision to not participate will not result in any loss of benefits to which you are otherwise entitled. You are voluntarily making a decision whether or not to participate in this survey. By clicking on the "I agree" button below, your consent to participate is implied. You should print a copy of this page for your records.

- ❍ I agree
- ❍ I do not agree

Appendix D

Delphi Round I: Survey Instrument

Thank you for your participation in this survey. Your help will advance the scholarly understanding of leadership at Christian colleges. Your participation will also help create a dashboard of indicators that academic leaders such as yourself can use to monitor trends and activities at Assemblies of God colleges.

To what extent do you agree that students choose to attend your institution because of the spiritual formation you offer them.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (6)

To what extent do you agree that chapel services are the heart of spiritual life on campus.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

To what extent do you agree that the integration of faith and learning is the greatest academic advantage that your college offers students.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

To what extent do you agree that your college adequately equips faculty in all disciplines to meaningfully integrate faith and learning in the classroom.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Neither Agree nor Disagree (3)
- ❍ Agree (4)
- ❍ Strongly Agree (5)

Please rank from 1 to 7 each of the following attributes of Assemblies of God colleges according to the potential they have to contribute to the spiritual formation of students. The rank of "1" indicates the attribute you feel has the greatest potential. Click and drag attributes to arrange them according to their rank.

_____ Affiliation of faculty with the Assemblies of God (1)

_____ Required Bible/theology courses in all majors (2)

_____ Chapel services (3)

_____ Student led ministries, including dorm life (4)

_____ The enforced moral code on campus (5)

_____ The integration of faith and learning (6)

_____ Spiritual emphasis week (7)

Please rank from 1 to 10 each of the following aspects of institutional life according to how important they are to your college's ability to pursue its mission. The rank of "1" indicates the aspect you feel is the most important. Click and drag aspects to arrange them according to their rank.

_____ Academic quality (1)

_____ Affordability (2)

_____ Condition of facilities (3)

_____ Job preparation of students (4)

_____ Student development programs (5)

_____ Commitment to the spiritual formation of students (6)

_____ Management of financial resources (7)

_____ Wide selection of majors (8)

_____ Athletic programs (9)

_____ Quality and productivity of personnel (10)

An indicator reports data on an activity that is vitally important to an institution. Leaders in higher education can create a dashboard of indicators they regularly use to provide a picture of the overall health of their institution as well as how well their institution is pursuing its mission. The goal of this survey is to identify, modify, and create indicators in order to produce a dashboard of indicators that would best serve Assemblies of God colleges.

Indicators of Academic Excellence

Each of the items below is a possible indicator of academic excellence at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on academic excellence at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of academic excellence.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Average SAT score of incoming freshmen.	❍	❍	❍	❍	❍
Average GRE score among graduates.	❍	❍	❍	❍	❍
Percent of students enrolled in four-year programs who complete their degree in five years or less.	❍	❍	❍	❍	❍
Percent of graduates who enroll in graduate school within five years.	❍	❍	❍	❍	❍
Book and monograph volumes in library, including those available via internet, per FTE student.	❍	❍	❍	❍	❍
Percent of faculty who hold terminal degrees.	❍	❍	❍	❍	❍
Percent of faculty who are part-time.	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of academic excellence that would be useful at Assemblies of God colleges.

Indicators of the Integration of Faith and Learning Each of the items below is a possible indicator of the integration of faith and learning at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on the integration of faith and learning at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of the integration of faith and learning.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years.	❍	❍	❍	❍	❍
Number of hours of training faculty in all disciplines received in the integration of faith and learning in the last year.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of the integration of faith and learning that would be useful at Assemblies of God colleges.

Indicators of the Spiritual Formation of Students Each of the items below are possible indicators of the spiritual formation of students at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on spiritual formation at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of spiritual formation.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
The minimum number of times students are required to attend chapel in an academic year.	❍	❍	❍	❍	❍
Mean chapel attendance as a percentage of maximum possible attendance.	❍	❍	❍	❍	❍
Attendance at spiritual emphasis week events as a percentage of maximum possible attendance.	❍	❍	❍	❍	❍
Average improvement in a Bible content exam administered to students when they first arrive and again before they graduate.	❍	❍	❍	❍	❍
Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of the spiritual formation of students that would be useful at Assemblies of God colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Tuition and fees as a percent of total current fund revenues.	❍	❍	❍	❍	❍
Instructional expenditures as a percent of total current fund expenditures.	❍	❍	❍	❍	❍
Plant operations and maintenance expenditures as a percent of total current fund expenditures.	❍	❍	❍	❍	❍
Excess (deficit) of current fund revenues over current fund expenditures.	❍	❍	❍	❍	❍
Current fund balance for this academic year as a percent of current fund balance for last academic year.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Long-term debt as a percent of total liabilities.	❍	❍	❍	❍	❍
Total assets as a percent of total liabilities.	❍	❍	❍	❍	❍
Change in unrestricted income as a percentage of last year's unrestricted income.	❍	❍	❍	❍	❍
Change in total net assets as a percentage of total net assets.	❍	❍	❍	❍	❍
Tuition and fees collected per FTE student.	❍	❍	❍	❍	❍
Percent of students with institutional scholarships and fellowships.	❍	❍	❍	❍	❍
Institutional scholarships and discounts as a percent of total tuition and fee income.	❍	❍	❍	❍	❍
Instructional expenditures per FTE student.	❍	❍	❍	❍	❍
Academic support expenditures as a percent of total current fund expenditures	❍	❍	❍	❍	❍
End-of-year replacement value of plant as a percent of beginning-of-year replacement value of plant.	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Gifts from alumni as a percent of total gifts.	❍	❍	❍	❍	❍
Percent of living alumni who have given at any time in the past five years.	❍	❍	❍	❍	❍
Gifts from parents as a percent of total gifts.	❍	❍	❍	❍	❍
Gifts from other individuals as a percent of total gifts.	❍	❍	❍	❍	❍
Gifts from private foundations as a percent of total gifts.	❍	❍	❍	❍	❍
Gifts from churches as a percent of total gifts.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Gifts and grants as a percent of total current fund revenues.	❍	❍	❍	❍	❍
Market value of endowment per FTE student.	❍	❍	❍	❍	❍
Market value of endowment as a percent of total assets.	❍	❍	❍	❍	❍
Endowment yield as a percent of total endowment.	❍	❍	❍	❍	❍
Total return on endowment as a percent of total endowment.	❍	❍	❍	❍	❍
End of year market value of total endowment as a percent of beginning-of-year value.	❍	❍	❍	❍	❍
Bequests received as a percent of total gifts.	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of students who are part-time.	❍	❍	❍	❍	❍
This fall's total FTE students as a percent of last fall's FTE students.	❍	❍	❍	❍	❍
Percent of enrolled students in each class (freshmen, sophomores, juniors and seniors).	❍	❍	❍	❍	❍
Percent of freshman applicants who are accepted.	❍	❍	❍	❍	❍
Percent of accepted freshman who matriculate.	❍	❍	❍	❍	❍
Degrees awarded as a percent of FTE enrollment.	❍	❍	❍	❍	❍
Percent of total students from within the state.	❍	❍	❍	❍	❍
Percent of total students from outside the state.	❍	❍	❍	❍	❍
Percent of total students from outside the U.S.	❍	❍	❍	❍	❍
Percent of total FTE students who are Black, Hispanic, and Asian.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of FTE faculty who are Black, Hispanic, and Asian.	❍	❍	❍	❍	❍
Percent of FTE faculty who are women.	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in Bible or ministry related courses.	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in liberal arts courses.	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in courses related to professional programs such as nursing or education.	❍	❍	❍	❍	❍
This fall's faculty headcount as a percentage of faculty headcount last fall.	❍	❍	❍	❍	❍
This fall's FTE faculty as a percentage of FTE faculty last fall.	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

Appendix E

Delphi Round I: Invitation Email to Panelists

Dear J. Doe,

My name is Bryan Davis and I have been an AG missionary to Senegal since 1996. I am writing you to ask your help with an important survey that is going to be conducted at selected Assemblies of God colleges. The purpose of this survey is to create a set of dashboard indicators for Assemblies of God colleges as part of my doctoral dissertation at the University of Nebraska-Lincoln. These indicators can be used by decision makers at Assemblies of God colleges to determine how their institutions are doing with regard to their ability to fulfill their mission. This dashboard can only be created by experienced leaders who know higher education, which is why you were handpicked for this study by the Alliance for Assemblies of God Higher Education.

Participants in this study are asked to complete a series of three online questionnaires, which take less than 20 minutes to complete. The second and third questionnaires are created using information provided by participants on the first questionnaire. Therefore, it is important that you complete the first questionnaire at your nearest convenience.

I want to do everything possible to make it easy and enjoyable for you to participate in this survey. After you have completed the third and final online survey I would like to send you a $5 e-gift certificate to Starbucks to express my appreciation. If you have any questions or comments, please feel free to email me at sandfromsenegal@yahoo.com. The secondary researcher, Dr. Brent Cejda, is also available for questions by email at bcejda2@unl.edu or by phone at (402) 472-0989. If you would like to speak to someone else, please call the Research Compliance Services Office at 402-472-6965 or contact them by email at irb@unl.edu. I thank you in advance for your participation in this survey.

Please follow the link below to the first online questionnaire.

<<<<<LINK*TO*SURVEY>>>>>

Best Wishes,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix F

Delphi Round I: First Reminder Email

Dear J. Doe,

This email is a reminder to participate in the online survey for leaders in Assemblies of God higher education. You were handpicked for this study, which will consist of three online questionnaires that will take less than 20 minutes to complete. The goal of this study is simply to create a dashboard of indicators Assemblies of God colleges can use to determine how they are doing with regard to their ability to fulfill their mission.

To express our thanks, you will receive a $5 e-gift certificate to Starbucks after completing the third and final online survey. Please feel free to reply to this email with any questions you may have.

Because the second questionnaire is based on information participants provide on the first questionnaire, it is very important that you complete the first questionnaire as soon as possible. Thank you in advance for your help with this survey.
The link below will take you to the online survey.

<<<<<LINK*TO*SURVEY>>>>>

Regards,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix G

Delphi Round I: Second Reminder Email

Dear J. Doe,

Please consider being part of this online survey concerning higher education in the Assemblies of God. You were handpicked for this study, which will consist of three online questionnaires that will take less than 20 minutes to complete. You will receive a $5 e-gift certificate to Starbucks after completing the third and final online questionnaire.

Much information has already been provided by your fellow participants who have completed the first questionnaire. We will use this information to create the second questionnaire, which will be made available to participants in just a few days. Therefore, the first questionnaire will be closed in 48 hours. Please follow the link below to complete the first questionnaire at your nearest convenience.

This email is the final invitation you will receive to participate in this study.

This link will take you to the first questionnaire.

<<<<<LINK*TO*SURVEY>>>>>

Regards,
Bryan Davis
sandfromsenegal@yahoo.com

Appendix H

Delphi Round II: Certification of IRB Exemption Status

April 14, 2014

Charles Davis
Department of Educational Administration
17304 Emiline St Omaha, NE 68136

Brent Cejda
Department of Educational Administration
141C TEAC, UNL, 68588-0360

IRB Number:
Project ID: 13982
Project Title: Strategic Indicators for Assemblies of God Colleges

Dear Charles:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

1. The Round II survey has been approved.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Becky R. Freeman, CIP
for the IRB

Appendix I

Delphi Round II: Survey Instrument

Thank you for your participation in Round II of this survey. The data you provided on the first questionnaire were used to remove some survey items as well as to create some new items for this questionnaire. On this questionnaire you will have the opportunity to revise your responses to survey items from the first questionnaire in light of the responses provided by your fellow participants.

On the first questionnaire you were asked to rank 7 attributes of Assemblies of God colleges according to the potential they have to contribute to the spiritual formation of students. The rank of "1" indicates the greatest potential. These 7 attributes are ranked in the table below according to the mean rank they received in the first questionnaire. For instance, the attribute "Chapel services" was ranked "3" on the table below because it received the third highest mean average. The percentage associated with each attribute represents the percentage of participants who ranked the attribute as it appears on the table. This means that "Chapel services" was ranked "3" by 26.92% of respondents. The rank you gave each attribute is presented in the column entitled "Your Rank."

Rank	Attribute	Mean Rank	Percentage	Your Rank
1	Integration of Faith and Learning	1.96	53.85%	
2	Required Bible and theology courses in all majors	2.81	34.62%	
3	Chapel Services	3.27	26.92%	
4	Student led ministry, including dorm life	4.08	23.08%	
5	AG affiliation of faculty	4.50	23.08%	
6	Spiritual emphasis week	5.58	23.08%	
7	Enforced moral code on campus	5.81	50.00%	

These seven attributes appear below in no particular order. Please click and drag them into the order you feel represents their importance to the spiritual formation of students. You may wish to revise or maintain how you ranked the attributes in Round I. Remember, the rank of "1" means that attribute has the highest potential.

_____ Affiliation of faculty with the Assemblies of God (1)

_____ Required Bible/theology courses in all majors (2)

_____ Chapel services (3)

_____ Student led ministries, including dorm life (4)

_____ The enforced moral code on campus (5)

_____ The integration of faith and learning (6)

_____ Spiritual emphasis week (7)

In the previous questionnaire you were asked to rank varying aspects of institutional life according to how important they are to your college's ability to pursue its mission. The rank of "1" indicates the most important aspect. These 10 aspects are ranked in the table below according to the mean rank they received. For instance, "Affordability" is ranked "4" because its mean rank was the fourth highest. The percentage associated with each aspect represents the percentage of participants who ranked the aspect as it is ranked on the table. This means that "Affordability" was given the rank "4" by 19.23% of participants. The rank you gave each aspect is presented in the column entitled "Your Rank."

Rank	Attribute	Mean Rank	Percentage	Your Rank
1	Commitment to the spiritual formation of students	2.15	57.69%	
2	Academic quality	2.31	46.15%	
3	Quality and productivity of personnel	4.12	15.38%	
4	Affordability	4.96	19.23%	
5	Management of financial resources	5.81	15.38%	
6	Job preparation of students	5.81	15.38%	
7	Student development programs	6.27	19.23%	
8	Wide selection of majors	6.88	15.38%	
9	Condition of facilities	7.15	7.69%	
10	Athletic programs	9.54	0.00%	

These 10 aspects appear below in no particular order. Please click and drag them into the order you feel represents their importance to the ability of your college to pursue its mission. You may wish to revise or maintain your previous ranking. Remember, the rank of "1" means that aspect is the most important.

_____ Academic quality	(1)
_____ Affordability	(2)
_____ Condition of facilities	(3)
_____ Job preparation of students	(4)
_____ Student development programs	(5)
_____ Commitment to the spiritual formation of students	(6)
_____ Management of financial resources	(7)
_____ Wide selection of majors	(8)
_____ Athletic programs	(9)
_____ Quality and productivity of personnel	(10)

For the following 2 items the mean and standard deviation of responses in Round I are provided. Your answer from Round I is also provided. You may wish to revise your answers to these items, or provide the same answers you did in the first round.

To what extent do you agree that chapel services are the heart of spiritual life on campus. Mean response: 3.81 Standard deviation: 1.2 Your response:

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

To what extent do you agree that your college adequately equips faculty in all disciplines to meaningfully integrate faith and learning in the classroom. Mean response: 3.69 Standard deviation: 0.84 Your response:

- 1 Strongly Disagree
- 2 Disagree
- 3 Neither Agree nor Disagree
- 4 Agree
- 5 Strongly Agree

An indicator reports data on an activity that is vitally important to an institution. Leaders in higher education can create a dashboard of indicators they regularly use to provide a picture of the overall health of their institution as well as how well their institution is pursuing its mission. The goal of this survey is to identify, modify, and create indicators in order to produce a dashboard of indicators that would best serve Assemblies of God colleges.

Indicators of Academic Excellence

Each of the items below is a possible indicator of academic excellence at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on academic excellence at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of academic excellence. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your response in Round I. Your may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Average SAT score of incoming freshmen. (Mean: 3.54; SD: 0.86; Your response:)	❍	❍	❍	❍	❍
Average GRE score among graduates. (Mean: 3.23; SD: 1.03; Your response:)	❍	❍	❍	❍	❍
Percent of students enrolled in four-year programs who complete their degree in five years or less. (Mean: 3.73; SD: 0.96; Your response:)	❍	❍	❍	❍	❍
Percent of graduates who enroll in graduate school within five years. (Mean: 3.42; SD: 0.76; Your response:)	❍	❍	❍	❍	❍
Book and monograph volumes in library, including those available via internet, per FTE student. (Mean: 2.96; SD: 0.96; Your response:)	❍	❍	❍	❍	❍
Percent of faculty who are part-time. (Mean: 3.15; SD: 0.83; Your response:)	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students. (Mean: 3.73; SD: 0.67; Your response:)	❍	❍	❍	❍	❍
Average ACT score of incoming freshmen.	❍	❍	❍	❍	❍
Percent of faculty who are part-time by department.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Number of students who have qualified for nationally recognized scholarships such as Rhodes Scholars, Fulbright Scholars, or Truman Scholars.	❍	❍	❍	❍	❍
Number of students accepted into the top graduate programs in their respective disciplines.	❍	❍	❍	❍	❍
Percentage of graduates hired in the career field for which their program of study was intended to prepare them.	❍	❍	❍	❍	❍
According to survey data from graduates, did their experience at our college prepare them to succeed in their given career?	❍	❍	❍	❍	❍
According to survey data from graduates, did their degree make them more hirable in their chosen career field?	❍	❍	❍	❍	❍
Average salary among graduates compared to national averages by field of study.	❍	❍	❍	❍	❍
Fulltime faculty workload of 12 credit hours or less.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of academic excellence that would be useful at Assemblies of God colleges.

Indicators of the Integration of Faith and Learning

Each of the items below is a possible indicator of the integration of faith and learning at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on the integration of faith and learning at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of the integration of faith and learning. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your response in Round I. You may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years. (Mean:3.85; SD: 1.01; Your response:)	❍	❍	❍	❍	❍
Number of hours of training faculty in all disciplines received in the integration of faith and learning in the last year. (Mean: 3.68; SD: 0.98; Your response:)	❍	❍	❍	❍	❍
Number of faculty who led students on ministry-related trips this year.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of faculty who are actively involved in ministry in their local church.	❍	❍	❍	❍	❍
According to course evaluations completed by students, did students see the meaningful integration of faith and learning in each course?	❍	❍	❍	❍	❍
Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith.	❍	❍	❍	❍	❍
Percentage of faculty who have written on the integration of faith and learning as it relates to their discipline. These writings may be for publication or for use within the college.	❍	❍	❍	❍	❍
Percent of faculty in all disciplines who have received training in the integration of faith and learning within the last two years. (Mean:3.85; SD: 1.01; Your response:)	❍	❍	❍	❍	❍
Number of hours of training faculty in all disciplines received in the integration of faith and learning in the last year. (Mean: 3.68; SD: 0.98; Your response:)	❍	❍	❍	❍	❍
Number of faculty who led students on ministry-related trips this year.	❍	❍	❍	❍	❍
Percent of faculty who are actively involved in ministry in their local church.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
According to course evaluations completed by students, did students see the meaningful integration of faith and learning in each course?	❍	❍	❍	❍	❍
Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith.	❍	❍	❍	❍	❍
Percentage of faculty who have written on the integration of faith and learning as it relates to their discipline. These writings may be for publication or for use within the college.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of the integration of faith and learning that would be useful at Assemblies of God colleges.

Indicators of the Spiritual Formation of Students

Each of the items below are possible indicators of the spiritual formation of students at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on spiritual formation at A/G colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of this section is a large textbox for you to suggest new indicators of spiritual formation. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your

response in Round I. Your may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
The minimum number of times students are required to attend chapel in an academic year. (Mean: 3.35; SD: 1.02; Your response:)	❍	❍	❍	❍	❍
Mean chapel attendance as a percentage of maximum possible attendance. (Mean: 3.27; SD: 1.08; Your response:)	❍	❍	❍	❍	❍
Average improvement in a Bible content exam administered to students when they first arrive and again before they graduate. (Mean: 3.50; SD: 0.91; Your response:)	❍	❍	❍	❍	❍
Increased spirituality as reported in a questionnaire, such as the Faith Maturity Scale, administered to students when they first arrive and again before they graduate. (Mean: 3.81; SD: 1.06; Your response:)	❍	❍	❍	❍	❍
Average improvement in a Bible and doctrine exam administered to students when they first arrive and again before they graduate.	❍	❍	❍	❍	❍
According to survey data from graduating students, how do they rate the effectiveness of different aspects of spiritual formation on campus (i.e., chapel, dorm devotions, Bible courses, etc.).	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percentage of chapel services in a year that were not dedicated to non-chapel activities, such as interviewing student government candidates and promoting special events.	❍	❍	❍	❍	❍
Percentage of students engaged in voluntary ministry.	❍	❍	❍	❍	❍

Please use the space below if you would like to suggest indicators of the spiritual formation of students that would be useful at Assemblies of God colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your response in Round I. Your may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Instructional expenditures as a percent of total current fund expenditures. (Mean: 3.88; SD: 0.71; Your response:)	❍	❍	❍	❍	❍
Plant operations and maintenance expenditures as a percent of total current fund expenditures. (Mean: 3.58; SD:0.86; Your response:)	❍	❍	❍	❍	❍
Current fund balance for this academic year as a percent of current fund balance for last academic year. (Mean: 3.69; SD: 0.97; Your response:)	❍	❍	❍	❍	❍
Change in unrestricted income as a percentage of last year's unrestricted income. (Mean: 3.62; SD: 0.9; Your response:)	❍	❍	❍	❍	❍
Change in total net assets as a percentage of total net assets. (Mean: 3.58; SD: 0.9; Your response:)	❍	❍	❍	❍	❍
Tuition and fees collected per FTE student. (Mean: 3.96; SD: 0.72; Your response:)	❍	❍	❍	❍	❍
Percent of students with institutional scholarships and fellowships.(Mean: 3.81; SD: 0.69; Your response:)	❍	❍	❍	❍	❍
Instructional expenditures per FTE student. (Mean: 3.92; SD: 0.8; Your response:)	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Academic support expenditures as a percent of total current fund expenditures. (Mean: 3.88; 0.77; Your response:)	❍	❍	❍	❍	❍
End-of-year replacement value of plant as a percent of beginning-of-year replacement value of plant. (Mean: 3.19; SD: 0.9; Your response:)	❍	❍	❍	❍	❍
Instructional expenditures by department as a percentage of total current fund expenditures.	❍	❍	❍	❍	❍
Tuition and fees collected per FTE student by department.	❍	❍	❍	❍	❍
Instructional expenditures per FTE student by department.	❍	❍	❍	❍	❍
Academic support expenditures by department as a percent of total current fund expenditures.	❍	❍	❍	❍	❍
The Composite Financial Index, or "CFI."	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your response in Round I. Your may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Gifts from alumni as a percent of total gifts. (Mean: 3.88; SD: 0.82; Your response:)	❍	❍	❍	❍	❍
Percent of living alumni who have given at any time in the past five years. (Mean: 3.81; SD: 0.8; Your response:)	❍	❍	❍	❍	❍
Gifts from parents as a percent of total gifts. NOTE: this item refers to parents of current students and alumni. (Mean: 3.12; SD: 0.91; Your response:)	❍	❍	❍	❍	❍
Gifts from other individuals as a percent of total gifts. (Mean: 3.62; SD: 0.8; Your response:)	❍	❍	❍	❍	❍
Gifts from private foundations as a percent of total gifts. (Mean: 3.69; SD: 0.93; Your response:)	❍	❍	❍	❍	❍
Gifts from churches as a percent of total gifts. (Mean: 3.88; SD: 0.82; Your response:)	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Market value of endowment per FTE student. (Mean: 3.62; SD: 0.94; Your response:)	❍	❍	❍	❍	❍
Market value of endowment as a percent of total assets. (Mean: 3.73; SD: 0.87; Your response:)	❍	❍	❍	❍	❍
Endowment yield as a percent of total endowment. (Mean: 3.69; SD: 0.79; Your response:)	❍	❍	❍	❍	❍
Total return on endowment as a percent of total endowment. (Mean: 3.62; SD: 0.8; Your response:)	❍	❍	❍	❍	❍
End of year market value of total endowment as a percent of beginning-of-year value. (Mean: 3.69; SD: 0.79; Your response:)	❍	❍	❍	❍	❍
Bequests received as a percent of total gifts. (Mean: 3.58; SD: 0.76; Your response:)	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be in a dashboard reporting on organizational health and mission focus at Assemblies of God colleges. Textboxes are provided under each indicator for you to suggest a modification to the indicator that would make it more useful. At the bottom of the page there is a large textbox for you to suggest new indicators that would be useful at A/G colleges. Some of the following items are new, based on suggestions from participants in Round I. For those items which appeared in Round I the mean and standard deviation of responses are given, along with your response in Round I. Your may wish to give the same answer as you did in Round I, or revise it in light of these data.

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of students who are part-time. (Mean: 3.5; SD: 0.65; Your response:)	❍	❍	❍	❍	❍
Percent of enrolled students in each class (freshmen, sophomores, juniors and seniors). (Mean: 3.69; SD: 0.84; Your response:)	❍	❍	❍	❍	❍
Percent of freshman applicants who are accepted. (Mean: 3.65; SD: 0.89; Your response:)	❍	❍	❍	❍	❍
Percent of total students from within the state. (Mean: 3.12; SD: 0.86; Your response:)	❍	❍	❍	❍	❍
Percent of total students from outside the state. (Mean: 3.08; SD: 0.93; Your response:)	❍	❍	❍	❍	❍
Percent of total students from outside the U.S. (Mean: 3.15; SD: 0.97; Your response:)	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of total FTE students who are Black, Hispanic, and Asian. (Mean: 3.65; SD: 1.02; Your response:)	❍	❍	❍	❍	❍
Percent of FTE faculty who are Black, Hispanic, and Asian. (Mean: 3.58; SD: 0.99; Your response:)	❍	❍	❍	❍	❍
Percent of FTE faculty who are women. (Mean: 3.54; SD: 0.99; Your response:)	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in Bible or ministry related courses. (Mean: 3.42; SD: 0.81; Your response:)	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in liberal arts courses. (Mean: 3.5; SD: 0.76; Your response:)	❍	❍	❍	❍	❍
Ratio of FTE faculty to FTE students in courses related to professional programs such as nursing or education. (Mean: 3.58; SD: 0.81; Your response:)	❍	❍	❍	❍	❍
This fall's faculty headcount as a percentage of faculty headcount last fall. (Mean: 3.23; SD: 0.76; Your response:)	❍	❍	❍	❍	❍
This fall's FTE faculty as a percentage of FTE faculty last fall. (Mean: 3.23; SD: 0.76; Your response:)	❍	❍	❍	❍	❍
Student retention as the percentage of last fall's fulltime students who re-enrolled fulltime this fall.	❍	❍	❍	❍	❍

	Usefulness				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Student retention as the percentage of fulltime students in the fall who re-enrolled fulltime in the spring.	❍	❍	❍	❍	❍
Number of new students who transfer in from a community college.	❍	❍	❍	❍	❍
For each department: This fall's FTE enrollment as a percentage of last fall's FTE enrollment.	❍	❍	❍	❍	❍
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last five years.	❍	❍	❍	❍	❍
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last ten years.	❍	❍	❍	❍	❍
The percentage of new students who come from AG churches.	❍	❍	❍	❍	❍

Please use the space below to suggest any indicators not listed above that you feel would be useful to A/G colleges.

Appendix J

Delphi Round II: Invitation Email to Panelists

Dear J. Doe,

Thank you once again for participating in this study. The data collected from the first questionnaire has been analyzed and used to prepare the second online questionnaire, which is now available for you to complete. Please follow the link at the bottom of this email to complete the second questionnaire at your nearest convenience. The information you provide on the second questionnaire will be used to prepare the third and final questionnaire.

As you know, the purpose of this study is to use a group of expert participants to create a set of dashboard indicators that would be suitable for use at Assemblies of God colleges. This kind of dashboard simply reflects what leaders deem the most important to know about how well their college is securing its future and pursuing its mission. This study is also part of my doctoral program at the University of Nebraska-Lincoln.

The data you provide on questionnaires will be saved on the secure Qualtrics server, only to be seen and analyzed by myself. After the study is completed and I have written the results in my dissertation, the data will no longer be stored in a way that associates questionnaire responses with individual participants. When the results of this study are written in my dissertation, or if results are presented or published elsewhere, individual responses will never be associated with individual participants. If you have any questions or comments about this study please feel free to contact me by email at sandfromsenegal@yahoo.com. The secondary researcher, Dr. Brent Cejda, is also available for questions by email at bcejda2@unl.edu or by phone at (402) 472-0989. If you would like to speak to someone else, please call the Research Compliance Services Office at 402-472-6965 or contact them by email at irb@unl.edu.

Thank you once again for participating in this study. As an expression of my appreciation I would like to send you an e-gift certificate for $5 at Starbucks after you complete the third questionnaire.

Please follow this link to the second questionnaire.

<<<<<LINK*TO*SURVEY>>>>>

Best Wishes,

Bryan Davis

Appendix K

Delphi Round II: First Reminder Email

Dear J. Doe,

Thank you for your participation in this study in Assemblies of God higher education. As you know, you were handpicked for this study which consists of three online questionnaires. This email is a reminder to complete the second online questionnaire. It is very important that you complete the second questionnaire as soon as possible because the information you provide on the second questionnaire will be used to create the third questionnaire.

Thank you in advance for your continued help with this survey. As an expression of our thanks, you will receive a $5 e-gift certificate to Starbucks after completing all three questionnaires.

The link below will take you to the second questionnaire.

<<<<<LINK*TO*SURVEY>>>>>

Regards,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix L

Delphi Round II: Second Reminder Email

Dear J. Doe,

Thank you for being part of this online survey in Assemblies of God higher education.

As you know, you were handpicked for this study which consists of three online questionnaires. Your peers have already provided much information on the second questionnaire, which will be used to create the third and final questionnaire of this survey. Please follow the link below to complete the second questionnaire. Your continued input is very important to this study. This email is the final reminder you will receive to complete the second questionnaire, which will be closed in 48 hours.

To express our appreciation, you will receive a $5 e-gift certificate to Starbucks after completing the third and final online questionnaire.

This link will take you to the second questionnaire.

<<<<<LINK*TO*SURVEY>>>>>

Regards,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix M

Delphi Round III: Certification of IRB Exemption Status

April 28, 2014
Charles Davis
Department of Educational Administration
17304 Emiline St Omaha, NE 68136

Brent Cejda
Department of Educational Administration
141C TEAC, UNL, 68588-0360

IRB Number:
Project ID: 13982
Project Title: Strategic Indicators for Assemblies of God Colleges

Dear Charles:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

1. The Round III survey has been approved.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Becky R. Freeman, CIP
for the IRB

Appendix N

Delphi Round III: Survey Instrument

Thank you for your participation in Round III, the final round of this survey. On this questionnaire you will have one last opportunity to revise your responses to survey items in light of the responses provided by your fellow participants. You will also have the opportunity to provide an explanation for any responses you maintain that are significantly different from the mean response of the panel. Just as a reminder, you are asked to rate indicators according to how useful they would be for decision makers to keep regular track of at your institution, not to report to anyone outside your college.

Previously you ranked 7 attributes of Assemblies of God colleges according to the potential they have to contribute to the spiritual formation of students. The rank of "1" indicates the greatest potential. These 7 attributes are ranked in the table below according to the mean rank they received in the second questionnaire. For instance, the attribute "Chapel services" was ranked "3" on the table below because it received the third highest mean average. The percentage associated with each attribute represents the percentage of participants who ranked the attribute as it appears on the table. This means that "Chapel services" was ranked "3" by 30.43% of respondents. The rank you gave each attribute in Round II is presented in the column entitled "Your Rank."

Rank	Attribute	Mean	Percentage	Your Rank
1	Integration of Faith and Learning	1.70	69.57%	
2	Required Bible and theology courses in all majors	2.52	34.78%	
3	Chapel Services	3.26	30.43%	
4	Student led ministry, including dorm life	4.04	30.43%	
5	AG affiliation of faculty	4.52	30.43%	
6	Spiritual emphasis week	5.96	39.13%	
7	Enforced moral code on campus	6.00	60.87%	

These seven attributes appear below in no particular order. Please click and drag them into the order you feel represents their importance to the spiritual formation of students. You may wish to revise or maintain how you ranked the attributes in Round II. A textbox has been added below, please use it if you would like to explain why you ranked these items as you did.

_____ Affiliation of faculty with the Assemblies of God (1)

_____ Required Bible/theology courses in all majors (2)

_____ Chapel services (3)

_____ Student led ministries, including dorm life (4)

_____ The enforced moral code on campus (5)

_____ The integration of faith and learning (6)

_____ Spiritual emphasis week (7)

You may use the space below to explain how you ranked the items above, especially if you have items ranked in an order that is significantly different from their mean rankings.

In the previous questionnaire you were asked to rank varying aspects of institutional life according to how important they are to your college's ability to pursue its mission. The rank of "1" indicates the most important aspect. These 10 aspects are ranked in the table below according to the mean rank they received in Round II. For instance, "Affordability" is ranked "4" because its mean rank was the fourth highest. The percentage associated with each aspect represents the percentage of participants who ranked the aspect as it is ranked on the table. This means that "Affordability" was given the rank "4" by 17.39% of participants. The rank you gave each aspect in Round II is presented in the column entitled "Your Rank."

Rank	Attribute	Mean	Percentage	Your Rank
1	Commitment to the spiritual formation of students	1.78	60.87%	
2	Academic quality	2.09	47.83%	
3	Quality and productivity of personnel	4.17	26.09%	
4	Affordability	5.00	17.39%	
5	Job preparation of students	5.87	8.7%	
6	Management of financial resources	6.09	17.39%	
7	Wide selection of majors	6.43	13.04%	
8	Student development programs	6.48	21.74%	
9	Condition of facilities	7.52	30.43%	
10	Athletic programs	9.57	82.61%	

These 10 aspects appear below in no particular order. Please click and drag them into the order you feel represents their importance to the ability of your college to pursue its mission. You may wish to revise or maintain how you ranked the attributes in Round II. A textbox has been added below, please use it if you would like to explain why you ranked these items as you did.

_____ Academic quality (1)

_____ Affordability (2)

_____ Condition of facilities (3)

_____ Job preparation of students (4)

_____ Student development programs (5)

_____ Commitment to the spiritual formation of students (6)

_____ Management of financial resources (7)

_____ Wide selection of majors (8)

_____ Athletic programs (9)

_____ Quality and productivity of personnel (10)

You may use the space below to explain how you ranked the items above, especially if you have items ranked in an order that is significantly different from their mean rankings.

An indicator reports data on an activity that is vitally important to an institution. Leaders in higher education can create a dashboard of indicators they regularly use to provide a picture of the overall health of their institution as well as how well their institution is pursuing its mission. The goal of this survey is to identify, modify, and create indicators in order to produce a dashboard of indicators that would best serve Assemblies of God colleges. Such a dashboard would represent data that leaders at an institution would regularly keep track of, not report to an outside body.

Indicators of Academic Excellence

Each of the items below is a possible indicator of academic excellence at Assemblies of God colleges. Please score each of the following items on how useful you feel they would be to reporting on academic excellence at A/G colleges. The mean and standard deviation of responses in Round II are shown for each indicator, along with your response in Round II. For the purpose of figuring response data, "None" = 1, "Low" = 2, "Middle" = 3, "High" = 4, and "Very High" = 5. You may wish to give the same answer as you did in Round II, or revise it in light of these data. Each indicator has a textbox for you to use if you would like to explain the rating you gave that indicator, especially if your response differs significantly from the mean response. In addition to rating the usefulness of indicators, please use the "Feasibility" column to rate how readily data could be compiled and reported for each indicator. "Feasibility" simply refers to how easy an indicator would be to implement. Indicators ranked "Very High" in feasibility would be the easiest to implement. Keep in mind that indicators are for monitoring trends within your college, not to report data to a group or agency outside your college.

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Average GRE score among graduates. (Mean: 3.35; SD: 0.98; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of graduates who enroll in graduate school within five years. (Mean: 3.61; SD: 0.66; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Book and monograph volumes in library, including those available via internet, per FTE student. (Mean: 3.0; SD: 0.8; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Average ACT score of incoming freshmen. (Mean: 3.65; SD: 0.93; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of faculty who are part-time by department. (Mean: 3.22; SD: 0.9; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Number of students who have qualified for nationally recognized scholarships such as Rhodes Scholars, Fulbright Scholars, or Truman Scholars. (Mean: 3.22; SD: 1.13; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Number of students accepted into the top graduate programs in their respective disciplines. (Mean: 3.65; SD: 0.83; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Average salary among graduates compared to national averages by field of study. (Mean: 3.35; SD: 0.65; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Fulltime faculty workload of 12 credit hours or less. (Mean: 3.04; SD: 0.98; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Please use the space below if you would like to explain any of your responses above, especially those that differ significantly from the mean response.

Some of the items below are possible indicators of the integration of faith and learning, while others are possible indicators of spiritual formation. Please score each of the following items on how useful you feel they would be at A/G colleges. Textboxes are provided under each indicator if you would like to explain how you rated that item, especially if your response differs significantly from the mean response. The mean and standard deviation of responses in Round II are shown for each indicator, along with your response in Round II. For the purpose of figuring response data, "None" = 1, "Low" = 2, "Middle" = 3, "High" = 4, and "Very High" = 5. You may wish to give the same answer as you did in Round II, or revise it in light of these data.
In addition to rating the usefulness of indicators, please use the "Feasibility" column to rate how readily data could be compiled and reported for each indicator. "Feasibility" simply refers to how easy an indicator would be to implement. Indicators ranked "Very High" in feasibility would be the easiest to implement. Keep in mind that indicators are for monitoring trends within your college, not to report data to a group or agency outside your college.

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percentage of chapel services in a year that were not dedicated to non-chapel activities, such as interviewing student government candidates and promoting special events. (Mean: 2.48; SD: 0.9; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Average improvement in a Bible and doctrine exam administered to students when they first arrive and again before they graduate. (Mean: 3.74; SD: 0.96; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Number of faculty who led students on ministry-related trips this year. (Mean: 2.96; SD: 0.98; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Percent of faculty who are actively involved in ministry in their local church. (Mean: 3.61; SD: 1.2; Your Response)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
According to survey data from graduating students, how do they rate the effectiveness of different aspects of spiritual formation on campus (i.e., chapel, dorm devotions, Bible courses, etc.). (Mean: 3.87; SD: 0.63; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Percentage of non-Bible related courses with at least one assignment related to the integration of course content with faith. (Mean: 3.61; SD: 0.99; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percentage of faculty who have written on the integration of faith and learning as it relates to their discipline. These writings may be for publication or for use within the college. (Mean: 3.39; SD: 0.94; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Please use the space below if you would like to explain any of your responses above, especially those that differ significantly from the mean response.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be at Assemblies of God colleges. The mean and standard deviation of responses in Round II are shown for each indicator, along with your response in Round II. For the purpose of figuring response data, "None" = 1, "Low" = 2, "Middle" = 3, "High" = 4, and "Very High" = 5. You may wish to give the same answer as you did in

Round II, or revise it in light of these data. Each indicator has a textbox for you to use if you would like to explain the rating you gave that indicator, especially if your response differs significantly from the mean response. In addition to rating the usefulness of indicators, please use the "Feasibility" column to rate how readily data could be compiled and reported for each indicator. "Feasibility" simply refers to how easy an indicator would be to implement. Indicators ranked "Very High" in feasibility would be the easiest to implement. Keep in mind that indicators are for monitoring trends within your college, not to report data to a group or agency outside your college.

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Plant operations and maintenance expenditures as a percent of total current fund expenditures. (Mean: 3.48; SD: 0.99; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Change in unrestricted income as a percentage of last year's unrestricted income. (Mean: 3.57; SD: 0.96; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Change in total net assets as a percentage of total net assets. (Mean: 3.52; SD: 095; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Tuition and fees collected per FTE student. (Mean: 3.87; SD: 0.95; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Instructional expenditures per FTE student. (Mean: 3.87; SD: 0.87; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Instructional expenditures by department as a percentage of total current fund expenditures. (Mean: 3.96; SD: 0.82; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Tuition and fees collected per FTE student by department. (Mean: 3.13; SD: 1.14; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Instructional expenditures per FTE student by department. (Mean: 3.17; SD: 1.03; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Academic support expenditures by department as a percent of total current fund expenditures. (Mean: 3.17; SD: 1.15; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
The Composite Financial Index, or "CFI." (Mean: 3.74; SD: 1.15; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Please use the space below if you would like to explain any of your responses above, especially those that differ significantly from the mean response.

The items below are indicators that are used by trustees and administrators at all kinds of colleges and universities. Please score each of these indicators on how useful you feel they would be at Assemblies of God colleges. The mean and standard deviation of responses in Round II are shown for each indicator, along with your response in Round II. For the purpose of figuring response data, "None" = 1, "Low" = 2, "Middle" = 3, "High" = 4, and "Very High" = 5. You may wish to give the same answer as you did in Round II, or revise it in light of these data. Each indicator has a textbox for you to use if you would like to explain the rating you gave that indicator, especially if your response differs significantly from the mean response. In addition to rating the usefulness of indicators, please use the "Feasibility" column to rate how readily data could be compiled and reported for each indicator. "Feasibility" simply refers to how easy an indicator would be to implement. Indicators ranked "Very High" in feasibility would be the easiest to implement. Keep in mind that indicators are for monitoring trends within your college, not to report data to a group or agency outside your college.

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of FTE faculty who are Black, Hispanic, and Asian. (Mean: 3.70; SD: 0.97; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Percent of FTE faculty who are women. (Mean: 3.57; SD: 0.95; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Market value of endowment per FTE student. (Mean: 3.61; SD: 1.08; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Gifts from private foundations as a percent of total gifts. (Mean: 3.74; SD: 1.05; Your response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Gifts from alumni as a percent of total gifts. (Mean: 3.87; SD: 0.92; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
Number of new students who transfer in from a community college. (Mean: 3.35; SD: 0.93; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
For each department: This fall's FTE enrollment as a percentage of last fall's FTE enrollment. (Mean: 3.74; SD: 0.92; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
This fall's FTE enrollment as a percentage of FTE enrollment averaged over the last ten years. (Mean: 3.61; SD: 0.94; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	Usefulness					Feasibility				
	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)	None (1)	Low (2)	Middle (3)	High (4)	Very High (5)
The percentage of new students who come from AG churches. (Mean: 3.7; SD: 0.93; Your Response:)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Please use the space below if you would like to explain any of your responses above, especially those that differ significantly from the mean response.

Thus far indicators have been discussed in the context of decision makers at your college regularly monitoring data within your institution. Many groups of peer institutions, such as colleges or universities within the same state system, design a dashboard of indicators for their group and share indicator data with each other. The goal of this kind of data sharing is not to compare or rank institutions but to monitor trends. To what extent do you agree or disagree that this kind of indicator data sharing could be useful to academic leaders at Assemblies of God colleges?

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

To what extent do you agree or disagree that a system of indicator data sharing could be established among Assemblies of God colleges?

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Please use the space below to elaborate on the usefulness and feasibility of sharing indicator data among Assemblies of God colleges.

Appendix O

Delphi Round III: Invitation Email to Panelists

Dear J. Doe,

Thank you for your continued participation in this study. The first two questionnaires have provided a great deal of insight from you and your fellow participants, which has been used to prepare the third and final questionnaire. Please follow the link at the bottom of this email to complete the third questionnaire at your nearest convenience. This questionnaire will finalize the indicators that will compose an indicator dashboard relevant to Assemblies of God colleges.

As you know, the purpose of this study is to use a group of expert participants to create a set of dashboard indicators that would be suitable for use at Assemblies of God colleges. This kind of dashboard simply reflects what leaders deem the most important to know about how well their college is securing its future and pursuing its mission. This study is also part of my doctoral program at the University of Nebraska-Lincoln.

The data you provide on questionnaires will be saved on the secure Qualtrics server, only to be seen and analyzed by myself. After the study is completed and I have written the results in my dissertation, the data will no longer be stored in a way that associates questionnaire responses with individual participants. When the results of this study are written in my dissertation, or if results are presented or published elsewhere, individual responses will never be associated with individual participants. If you have any questions or comments about this study please feel free to contact me by email at sandfromsenegal@yahoo.com. The secondary researcher, Dr. Brent Cejda, is also available for questions by email at bcejda2@unl.edu or by phone at (402) 472-0989. If you would like to speak to someone else, please call the Research Compliance Services Office at 402-472-6965 or contact them by email at irb@unl.edu.

Thank you once again for participating in this study. As an expression of my appreciation I would like to send you an e-gift certificate for $5 at Starbucks after you complete the third questionnaire.

Please follow this link to the third questionnaire.
<<<<<LINK*TO*SURVEY>>>>>

Best Wishes,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix P

Delphi Round III: First Reminder Email

Dear J. Doe,

Thank you for your participation in this study. You and your fellow participants are making a valuable contribution to scholarly research in higher education!

This email is a reminder to complete the third and final online questionnaire. It is very important that as many participants as possible complete all three questionnaires. The third questionnaire will finalize the dashboard of indicators that you and your peers deem useful at Assemblies of God colleges.

Thank you in advance for your continued help with this survey. As an expression of our thanks, you will receive a $5 e-gift certificate to Starbucks after completing the third questionnaire.

The link below will take you to the third questionnaire.
<<<<<LINK*TO*SURVEY>>>>>

Regards,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix Q

Delphi Round III: Second Email Reminder

Dear J. Doe,

Thank you for your participation in the first two rounds of this online survey. You have made a very important contribution to this study.

You were handpicked for this study, and it is important that as many participants as possible complete all three questionnaires. At your nearest convenience, please follow the link below to complete the third and final questionnaire before it closes in 24 hours. Your peers have already provided much information on the third questionnaire, which will construct the final dashboard of indicators you and your peers have deemed useful at Assemblies of God colleges. This email is the final reminder you will receive to complete the third questionnaire. After completing the third questionnaire you will receive a $5 e-gift certificate to Starbucks as a token of our appreciation.

This link will take you to the third questionnaire.
<<<<<LINK*TO*SURVEY>>>>>

Thank you once again for being part of this study.

Regards,

Bryan Davis
sandfromsenegal@yahoo.com

Appendix R

Thank You Email to Panelists who Completed Round III

Dear J. Doe,

Thank you so much for having completed all three questionnaires! You have made an important contribution to the scholarly study of higher education. Moreover, your time and input have helped to create a dashboard of indicators that reflect the mission of Assemblies of God colleges. A final copy of this dashboard of indicators is attached to this email. Your $5 e-gift certificate to Starbucks will be coming to you soon. Be looking for an email from Starbucks.

Once again, thank you!

Yours Truly,

Bryan Davis
sandfromsenegal@yahoo.com