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An exploration of compliance predictors of the institutional effectiveness requirements of the Southern Association of Colleges and Schools Commission on Colleges' baccalaureate instittutions between 2008 and 2012

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AN EXPLORATION OF COMPLIANCE PREDICTORS OF THE INSTITUTIONAL EFFECTIVENESS REQUIREMENTS OF THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS COMMISSION ON COLLEGES'BACCALAUREATE INSTITUTIONS BETWEEN2008 AND 2012

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Benjamin Ninjo Djeukeng

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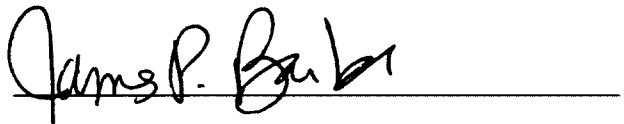
Approved November, 25 2014 by



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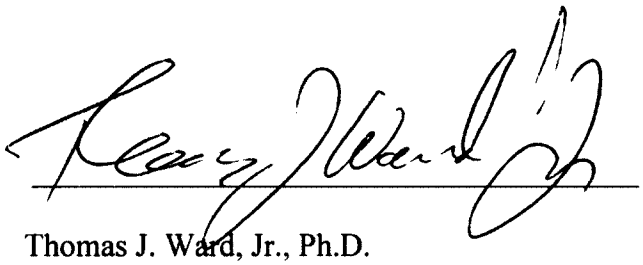

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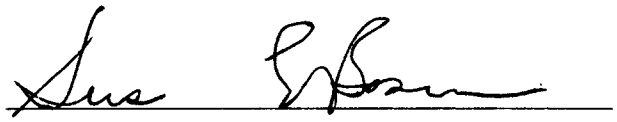

Susan L. Bosworth, Ph.D.

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Dedication

To my lovely parents Mr. and Mrs. Djeukeng who taught me the value of independence and hard work from my early childhood by "teaching me how to fish." Thanks for helping me lay the foundation for such a rewarding fishing career; this is the biggest fish I have caught so far. I dedicate this dissertation to both of you, to all my siblings, and to my daughter Daniela who has been so patient with me during this last fishing expedition. Daniela, I look forward to catching up with you and helping you prepare for your fishing journeys.

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"I can do all things through Christ who strengthens me" (Philippians 4:13). I thank God for the gifts of life and perseverance.

I owe a debt of gratitude to a number of people for their supportive role in my Dissertation journey. Although I will acknowledge only a few here, I am thankful to all my supervisors, colleagues, faculty members, family and friends who encouraged me along the way.

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As my doctoral advisor, Dr. Dot Finnegan's selflessness helped me manage through my dissertation journey. Dr. Finnegan, thank you for always being there when I needed your help.

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Abstract

Under growing pressure from various higher education stakeholders, accreditors have shifted from using inputs and resources when judging the quality of institutions to requiring that colleges and universities engage in institutional effectiveness (IE) to demonstrate how they are fulfilling their mission. As a result of postsecondary institutions' challenges with IE, students and parents have continued to rely on old indicators of quality when choosing where to go to college.

The purpose of this study was to explore the relationship between SACSCOC accreditation status based on IE and some common student and institutional measures the public has come to depend on, when judging the quality of a college or university. This was accomplished through a correlational research design involving a purposeful sampling strategy that consisted of all baccalaureate degree granting institutions that were reviewed by SACSCOC between 2008 and 2012.

Binary logistic regression analysis indicated that only one student variable and one institutional variable were significant predictors of SACSCOC accreditation status based on IE requirements: student service expenses per FTE and full-time retention rate.

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THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

AN EXPLORATION OF COMPLIANCE PREDICTORS OF THE INSTITUTIONAL EFFECTIVENESS REQUIREMENTS OF THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS COMMISSION ON COLLEGES' BACCALAUREATE INSTITUTIONS BETWEEN 2008 AND 2012

Chapter One: The Problem

The benefits of a higher education in today's society are undeniable (Astin & Antonio, 2012; Hulsey, 2012; Ruben, 2007). They range from the increased ability in landing a job in the global economy (Lingenfelter & Lenth, 2005; Liu, 2011b) to individual, professional, and societal benefits. However, the escalating cost of higher learning has been a public concern in recent years (Carey, 2007; Hulsey, 2012; Kuh & Ikenberry, 2009). The quality of higher education has also been called into question lately (Moore, 1986), as college and university stakeholders such as governments (state and federal), students, parents, and the public began demanding that higher education be more efficient at matching actual student learning outcomes with expected learning outcomes of the educational process. In an effort to address such concerns, the federal government intervened not only with financial assistance for students and institutions, but also with demands for better quality in higher education. Quality in this context has been defined as evidence of student academic achievement (Astin & Antonio, 2012; McLeod & Atwell, 1992). Thus, colleges and universities have been under pressure not only to control their costs, but to enhance student learning as well (Alfred, 2011; Babaoye, 2006; Head, 2011; Liu, 2011a; Middaugh, Kelly, & Walters, 2008; Todd & Baker III, 1998; Welsh & Metcalf, 2003a).

The federal government has used regional accrediting agencies to leverage its funding and financial assistance to higher education institutions (Ewell, 2011a; Welsh & Metcalf, 2003a). Higher education stakeholders have also depended on accreditation to

get a sense of institutional quality (Ewell, 2011a), which informsstudents' and families' decisions as to institutional selectionfor postsecondary education (Cameron, 1986; Liu, 2011a). Although accreditation is an external process that has been used for more than half a century to ensure the quality of higher education in the U.S. (Ewell, 2011a; Dodd, 2004), the way accreditation hasbeen carried out has shifted as calls have gotten louder for colleges and universities to be more accountable. The pressure on accrediting agencies has mostly come from the federal government, which uses accreditors as a funding lever for institution and student aid. That is because federal aid is only disbursed to students attending institutions accredited by agencies approved by the U.S. Department of Education (USDOE). Based on the Tenth Amendment of the U.S. Constitution, education is one of the powers delegated to the states, as opposed to the federal government (Federal and State Policy, 2010; Neal, 2008).

The Federal Government and Higher Education

The federal government spends tens of billions of dollars annually to fund higher education (Eaton, 2007; Neal, 2008; Vaughn, 2002) through student financial aid as well as various research grants to colleges and universities. In 2012 and 2013, this figure was 50 billion and 47 billion, respectively (USDOE, 2014). For the past several decades, the U.S. federal government has used financial assistance as a means to enforce its policies in higher education. Those policies have mostly revolved around issues of access, affordability, and quality in tertiary education. Such policies have generally been introduced and passed through Congress and enforced through the USDOE. The policies include the Morrill Acts of 1862 and 1890 as well as the GI Bill of Rights of 1944. The Morrill Acts not only helped give technical and applied education the same level of

importance as its liberal arts counterpart, but it also required that separate land-grant institutions not be created for students of color. The GI Bill was originally introduced as the Serviceman's Readjustment Act, to provide financial aid to eligible World War II veterans who enrolled in college. In 1964, Title VI of the Civil Rights Act was enacted in an effort to remove segregation in higher education by levying financial sanctions on non-compliant institutions. Following Title VI, the Higher Education Act (HEA) of 1965 was passed with the intent not only to increase access to higher education, but to enhance its quality as well (Federal and State Policy, 2010). The HEA has since been renewed every six years with an emphasis on current higher education issues (Lingenfelter & Lenth, 2005). In recent years, the federal government has focused its attention on student learning outcomes and accountability in postsecondary education (Brittingham, 2008). As recently as August 2013, the USDOE announced the Postsecondary Institutions Ratings System (PIRS) that will be effective in 2015 with financial aid links beginning in 2018. Metrics for the proposed PIRS will be based on access, affordability, and outcomes.

However, instead of dealing directly with colleges and universities, the federal government through the USDOE has relied on private, self-regulated accreditation agencies to account not only for its massive investment in higher education, but also to assure that students are learning what they are supposed to learn (Eaton, 2007). Eaton (2007) also points out that the public has gradually believed that federal intervention was necessary in order for higher education to be more accountable.So, the announcement of the PIRS was not too surprising.

Accountability in Higher Education

Debates about accountability in higher education have been fueled by the public's concerns about the cost and quality of postsecondary education (Lingenfelter & Lenth, 2005). Carey (2007) warned of two potential negative consequences of higher education's inadequate response to the accountability movement. The first was to have an accountability system imposed from outside higher education either by the federal government or by accrediting agencies. The second was to lose public support. So, where does higher education begin a proper response to accountability demands?Hulsey (2012) suggestedcolleges and universities start by answering three questions: (a) What does accountability mean in this context? (b) What accountability issues need attention? (c) Which of those issues should postsecondary institutions be focusing on?

Accountability exists when colleges and universities show responsibility to their stakeholders both for inputs and outputs (McLeod & Atwell, 1992). Although the type and amount of information remains a debate, there seems to be an agreement on providing evidence on student learning and institutional performance as well as making that information publicly available (Brittingham, 2008; Eaton, 2007). Despite some criticism of their oversight over the quality of higher education, accrediting agencies remain the gatekeepers for federal funds as well as quality control agents for colleges and universities.

An Overview of Accreditation

Accreditation is a process used by U.S. colleges and universities to voluntarily self-regulate (Kincaid & Andresen, 2010) for the purpose of providing quality assurance and encouraging quality improvement (Baker, 2002). Although regional and specialized

accreditations arethe two main types of accreditation in the U.S. (Baker, 2002), national accreditation is a third type of accreditation. While regional accreditation focuses on evaluating colleges and universities holistically, specializedor programmatic accreditation concentrates on individual programs, courses of study, or even courses within a college or university (Head & Johnson, 2011; Vaughn, 2002). National accreditation oversees distance education providers; rabbinical, Christian, and other theological schools; independent, nonprofit career schools; as well as colleges based in the U.S. and abroad that have neither regional nor programmatic accreditation (Volkwein, 2010b). Volkwein (2010b) asserts that while five of the national accreditors limit their scope within the continental U.S., the Accrediting Council of Independent Colleges and Schools (ACICS)which is another national accreditor, operates in the United States and overseas.

Through the USDOE's National Advisory Committee on Institutional Quality and Integrity (NACIQI), the federal government reviews and recognizes accreditors as gatekeepers for federal funds disbursed to the respective institutions they accredit (Ewell, 2011b; Schmadeka, 2012). The federal government also recognizes the Council for Higher Education Accreditation (CHEA) as an advocate for the self-regulation of academic quality through accreditation. While CHEA standards focus on academic quality and institutional or programmatic improvement, USDOE standards emphasize whether or not a postsecondary institution or program is of good enough quality to be eligible for federal student financial aid and other federal program funding (Eaton, 2012). Kincaid and Andresen (2010) asserted that some state legislatures mandate CHEA-recognized accreditation for disciplines for which there are accreditors recognized by CHEA. For example, the State of Pennsylvania may require institutions that offer

degrees in Business Administrationto have programmatic accreditation from the Association to Advance Collegiate Schools of Business (AACSB). With a membership of about 3000 degree-granting higher education institutions, CHEA recognizes at least 60 regional and specialized accrediting agencies (CHEA, 2013; Liu, 2011a). Although each of the accrediting bodies has its own principles, institutional effectiveness is one that appears to be shared by most, if not all, of the six regional accrediting organizations (Head & Johson, 2011; McLeod & Atwell, 1992; Moore, 1986). That is, because those accreditors see institutional effectiveness as a way to ensure and advance quality in higher education. The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) is one of the six USDOE and CHEA-recognized regional accrediting agencies and the accreditor of interest in this study.

The Southern Association of Colleges and Schools Commission on Colleges

Founded in 1912, SACSCOC accredits 804 institutions of higher learning in Southern states as well as nine institutions outside the continental U.S. Its mission is to "assure the educational quality and improve the effectiveness of its member institutions" (SACSCOC, 2013a, para. 2). SACSCOC carries out its mission through six core values: integrity, continuous quality improvement, peer review/self-regulation, accountability, student learning, and transparency.

Colleges and universities seeking initial accreditation or reaffirmation with SACSCOC are required to comply with SACSCOC' Principles of Accreditation (SACSCOC, 2013b). Institutions that fail to comply with any of those requirements are given a maximum two-year monitoring period to achieve compliance. SACSCOC denies or removes accreditation if adequate progress is not made any time during the two-year

timeframe or if there is compliance failure with the Principles of Accreditation at the end of the two-year monitoring period.

Regardless of type, an institution applying for SACSCOC accreditation or reaffirmation has to comply with (a) the Principle of Integrity, (b) the Core Requirements, (c) the Comprehensive Standards, (d) additional Federal Requirements, and (e) the policies of the Commission on Colleges (SACSCOC, 2013b).The Principle of Integrity is an agreement between SACSCOC and a particular institution stating that all parties will be honest and open with their constituencies as well as with one another. A Core Requirement is a minimum level of expectation that an institution applying for initial or continued accreditation must meet. Comprehensive Standards are operational requirements that SACSCOC applicants must satisfy. Federal Requirements are criteria established by the U.S. Department of Education that member institutions must meet in order to be eligible to participate in programs sponsored under Title IV of the Higher Education Act.A policy is a mandatory course of action that either SACSCOC or an institution applying for initial or continued accreditation must follow. Institutional effectiveness is one of SACSCOC's Principles of Accreditation under Core Requirements 2.5 and 2.12 as well as Comprehensive Standards 3.3.1 and 3.3.2.

A SACSCOC institution is placed in either warning or probation if it fails to comply with the Principles of Accreditation. A warning is the less severe of the two types of sanctions and is often levied earlier during an institutional review process. An institution may be placed on probation for failing to correct deficiencies or make adequate progress toward compliance with the Principles of Accreditation. While an institution's accreditation will not be reaffirmed during the warning or probationary

period, its accreditation may continue(SACSCOC, 2013b). It is also SACSCOC's policy that its Board of Trustees may remove any college or university from membership at any time, depending on the significance of the noncompliance. Upon recommendations from the Executive Council, which is informed by one of SACSCOC's committees on Compliance and Reports, SACSCOC's Board of Trustees makes final decisions on warnings, probations, and removals of membership. Should the Board of Trustees judge it necessary to place an institution under one of those sanctions, the institution's Chief Executive Officer and its governing board chair will be notified in writing (SACSCOC, 2013b).

Being the first to adopt *institutional effectiveness* as one of its institutional accreditation requirements in the mid-1980s, SACSCOC is often credited for introducing the concept of institutional effectiveness to higher education (Head, 2011). In general, institutional effectiveness is the process of defining learning outcomes, assessing the extent to which those outcomes are achieved, and using assessment results to make improvements; therefore it isin colleges and universities' best interest to find ways to improve internally while being externally accountable.

Assessment in Higher Education

Ruben (2007) argued that almost no one would deny the value of assessment if it were defined in neutral and simple terms. That is, because, when done right, assessment produces institutional effectiveness. Astin and Antonio (2012) posited that assessment is one of the ways we operationalize the concept of excellence. Unfortunately, when mentioned in the context of higher education, assessment is a continuing point of contention between the USDOE, Congress, accrediting agencies, and postsecondary

institutions (Schmadeka, 2012). The different parties do not agree on what assessment of student learning can and should be.

For some, the best way to assess academic achievement is to use standardized instruments. On the one hand, proponents of such an approach argue that it would yield comparable results across institutions. Opponents on the other hand suggest that a standardized approach would be inadequate for a diverse educational system serving a diverse society (Brittingham, 2008; Volkwein, 2010b). However, the status quo is unsustainable as federal regulation would increase, unless the current self-regulation concept for accreditation is improved to address specific public concerns such as cost and outcomes.Volkwein's (2010b) proposed solution was for colleges and universities to collect both qualitative and quantitative evidence of teaching and learning outcomes, compare them to expected outcomes, and use the results for continuous improvement, thereby demonstrating institutional effectiveness (Head & Johnson, 2011). Although there is no one-size-fits-all approach to institutional effectiveness, such a solution is consistent with most accounts on what institutional effectiveness should be about.

Problem Statement

Recent studies show that for the past several years, college and university graduates have generally not experienced the same kinds of benefits that previous postsecondary graduates have enjoyed (Cassidy & Wright, 2008; Gray, 2005; Head, 2011). Graduates from the United States have notbeen as competitive on the global market as they once were (Kanter, 2011). Domestically, U.S. college graduates have also been experiencing unemployment, employer dissatisfaction (Head, 2011), and underemployment (Cassidy & Wright, 2008; Gray, 2005). That state of affairs has

increasingly been blamed on the quality of the U.S. higher education, because, as Liu (2011b) argued, the quality of a country's postsecondary education is positively correlated to its international competitiveness.

In an attempt to address issues related to student achievement, institutional effectiveness, a process used to evaluate and document the quality of an institution, is now a key requirement set by regional accrediting agencies (Kern, 1990; McLeod & Atwell, 1992; Ohia, 2011). It is worth noting that student achievement, which should be addressed under SACSCOC's Federal Requirement 4.1, is a measure of student success as it relates to accomplishing an institution's mission. It typically includes metrics such as retention, graduation, course completion, and job placement or graduate school enrollment rates. Institutional effectiveness is generally defined as a three-prong process of (a) defining expected outcomes, (b) assessing the extent to which those outcomes are achieved, and (c) using assessment results to inform decision-making as well as make improvements (Head & Johnson, 2011; Sullivan & Wilds, 2001; Welsh & Metcalf, 2003). The above definition is congruent with SACSCOC's Comprehensive Standard 3.3.1, which is about demonstrating institutional effectiveness at the operational unit level.

Another way SACSCOC defines institutional effectiveness is as engaging in "ongoing, integrated, and institution-wideresearch-based planning and evaluation processes that (1) incorporate asystematic review of institutional mission, goals, and outcomes; (2) resultin continuing improvement in institutional quality; and (3) demonstratethe institution is effectively accomplishing its mission" (SACSCOC, 2012, p. 13). The above institutional level SACSCOC's definition of institutional effectiveness is

based on Core Requirement 2.5. Its intent is to foster a culture of institutional effectiveness at SACSCOC member institutions in the form of evidence-based decision making and continual improvement. SACSCOC institutions undergoing accreditation renewal are also required to demonstrate institutional effectiveness through a Quality Enhancement Plan (QEP), which is described in Chapter Two. Vaughn (2002) predicted that higher education will become increasingly important to nations that aspire to be leaders in the global economy and urged that steps be taken to better understand and measure factors that impact the quality of higher learning. Assessment has been mandated in higher education because it is a reliable way to document evidence of institutional effectiveness, but also to respond to accountability demands (Banta, Ewell, Seybert, Gray, &Pike, 1999; Dodd, 2004; Ohia, 2011; Volkwein, 2010a). Unfortunately, as Volkwein (2010a) pointed out, instead of sharing assessment findings and using assessmentresults for decision making, most institutions excel at gathering data rather than using them to inform decision making. Thus, it is not surprising that institutional effectiveness is the requirement for whichmost SACSCOC schools are cited for non-compliance (Head & Johnson, 2011; Sullivan & Wilds, 2001). Although a relatively rare occurrence, failing to comply with the institutional effectiveness requirementscould potentially impact domestic and global markets, because it could mean potential loss of accreditation, which could lead to fewer competent graduates in the job market and even joblessness.

Purpose of the Study

No college or university president would look forward to telling stakeholders about accreditation actions against their institution (Kern, 1990), because of the devastating effects that a loss of accreditation would have on their institution. The loss of federal funding is the most salient consequence resulting from losing accreditation (Dodd, 2004; Ewell, 2011). A college or university stands to see its enrollment drop if its students cannot qualify for federal financial aid due to its accreditation status. With fewer students, such an institution, which would have been given the opportunity to address any non-compliance issues through a probationary period, would have to reduce the number of people on its payroll and eventually close altogether, if its leaders do not find ways to get its accreditation back through adequate progress. Although accreditation requirements have shifted from weighing heavily on inputs and resources toward using measurable outcomes to gauge institutional effectiveness (Head, 2011; Moore, 1986; Volkwein, 2010a), the public still relies on factors such as retention and graduation rates, student-to-faculty ratios, expenses per full-time equivalent (FTE), etceteraas indicators of quality (Cameron, 1986; Volkwein, 2010b; Welker & Morgan, 1991). The National Center for Education Statistics (2014b) defines student FTE as the sum of full-time student enrollment and the full-time equivalent part-time student enrollment. When faced with college choice decisions, the public has also looked at value factors such as financial aid and institutional type. Financial aid considerations are especially important for economically disadvantaged students (Chopka & White-Mincarelli, 2011; Kim, 2012; Lillis & Tian, 2008; Manfield & Warwick, 2005) who are often left to choose among non-selective institutions. Institutional type refers to whether an institution is public, private not-for-profit, or private for-profit. Though tuition and fees at four-year public

and private institutions grew respectively by 51 percent and 36 percent from 1994 to 2004 (College Board, 2004), attending public institutions to take advantage of lower in-state tuition has also been taken into account by students from low- and middle-income families.

Existing studies show that regional accrediting agencies, including SACSCOC, have mandated institution-wide assessments for the purpose of demonstrating institutional effectiveness. Studies also show that colleges and universities have struggled to demonstrate institutional effectiveness. One of the reasons for the struggles is the lack of agreement on the definition of institutional effectiveness (Cameron, 1978, 1986; Welsh & Metcalf, 2003). This may partially explain why some higher education stakeholders still use pre-institutional effectiveness era characteristics as indicators of quality. Not only is the literature scant on studies about accreditation and institutional effectiveness, but very little, if any, is known about the relationships between accreditation, institutional effectiveness, and some salient institutional and student characteristics. The purpose of this study is to explore the relationship between SACSCOC accreditation status based on institutional effectiveness requirements and selected variables on which the public has come to rely (e.g. selectivity and graduation rate), when judging the quality of a higher education institution.

Conceptual Framework

The conceptual framework for this study is built upon three existing models of assessment: the Malcolm Baldridge Model, the Excellence in Higher Educational framework, and the Input-Environment-Output Model. Over the past 30 years, these three models have influenced the way that colleges and universities examine institutional

effectiveness. A brief description of each of the models will be helpful in understanding the present study's conceptual framework.

The Malcolm Baldridge Model

The result of several years of cooperative work among academics, business, and government leaders in the early 1980s, the Malcolm Baldrige model was named after the late U.S. Secretary of Commerce with the same name and culminated in an act of Congress that was signed into law by President Reagan in 1987 (DeCarlo & Sterett, 1995). The model was based on ideas from eminent North American and Asian quality theorists (Winn & Cameron, 1998). Its goal was to address concerns with the declining quality and competitiveness of U.S. goods and services in the global economy. One key element of the law that resulted from the model was the creation of the annual Malcolm Baldrige National Quality Award (MBNQA) to be given to organizations that "successfully challenge and meet the award requirements" (DeCarlo & Sterett, 1995, p. 80; Leist, Gilman, Cullen, & Sklar, 2004). The Malcolm Baldrige model, the Baldrige model, the MBNQA framework, the Baldrige framework are all terms often used interchangeably to refer to the Malcolm Baldrige model. While the award requirements were expected to evolve through annual improvements, its seven basic tenets were expected to remain constant.

As described by Winn and Cameron (1998), the seven dimensions of the MBNQA framework that characterize a quality organization are as follows:

- Quality leadership – the role leadership plays in clarifying, modeling, and fostering quality values throughout its organization and its environment

- Quality information and analysis – how well the organization collects and analyzes from internal operations as well as from its environment
- Strategic quality planning – the amount of planning done for the purpose of achieving and enhancing quality
- Human resource development and management – the level of planning and implementation that involves, empowers, recognizes and rewards, develops and satisfies people within the organization
- Management of process quality – the level of basic quality instruments, assessments, and processes used in internal and external operations
- Quality and operational results – the level of performance achieved by the organization
- Customer focus and satisfaction – how well customers' expectations are identified and met, customer prioritization is evident, and customer relationships are getting better.

Winn and Cameron (1998) pointed out that, despite a lack of empirical evidence, the dimensions are thought to be interconnected. The leadership dimension is considered to be the *driver* of quality. Four dimensions make up the *systems* of quality: information and analysis, strategic quality planning, human resource development and management, and management of process quality. The quality and operational results as well as the customer focus and satisfaction dimensions are classified as the *outcomes* of quality. The interconnections between the different dimensions of the MBNQA framework are illustrated in Figure 1.1 below. Some critics of such a model have argued that it would

not be appropriate for industries that require some flexibility such as health care and education.

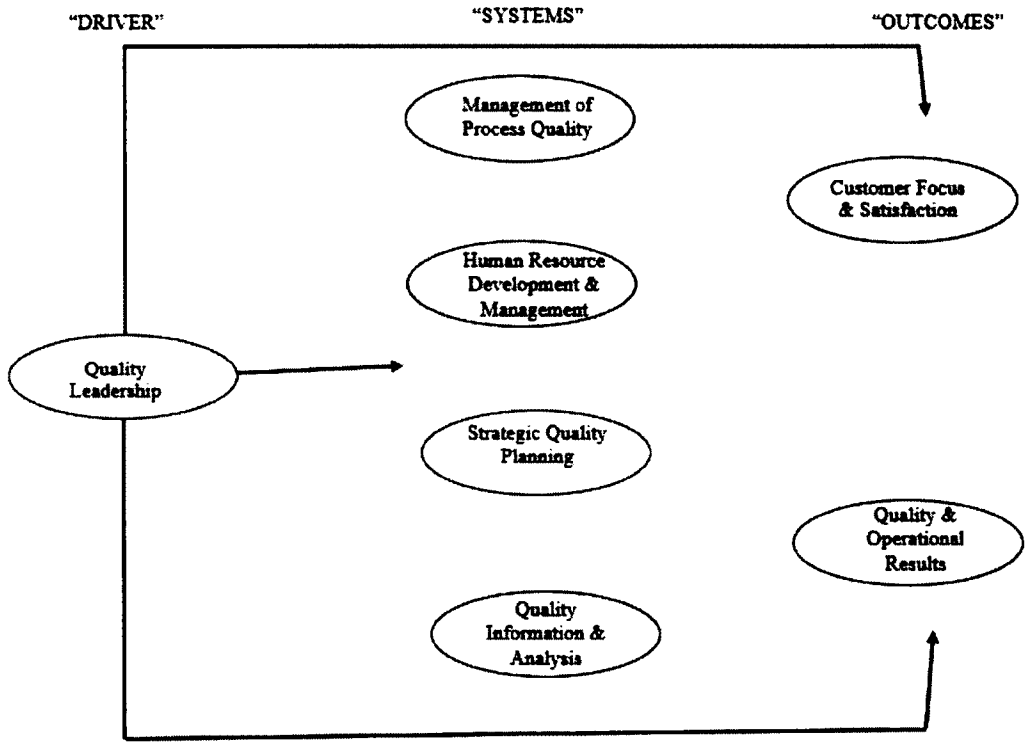

Figure 1.1. The Malcolm Baldrige National Quality Framework. Adapted from "ORGANIZATIONAL QUALITY: An examination of the Malcolm Baldrige national quality framework," by B. A. Winn and K. S. Cameron, 1998, *Research in Higher Education,39*(5), p. 7.

As of 1999, the MBNQA core principles were available in moderately adjusted versions for business organizations, health care organizations, and educational organizations (Leist et al., 2004). Following are the 2003 Baldrige Education Criteria: leadership; strategic planning; student, stakeholder, and market forces; measurement, analysis, and knowledge management; faculty and staff focus; process management; and organizational performance results. For over a decade, thousands of U.S. colleges and universities have used the MBNQA as their internal assessment framework of choice (Belohlav, Cook, & Heiser, 2004; Furst-Bowe & Bowe, 2007). That is, because, unlike the original version, the adjusted rendition for educationalorganizations of the MBNQA

fits with the essential functions of higher education and leads to lasting improvement. In fact, the concept of quality improvement led to SACSCOC's quality enhancement plan, which is a requirement for institutions applying for SACSCOC reaffirmation (Furst-Bowe & Bauer, 2007). Although higher education has the resources and the expertise it needs to manage change and innovation, the institutional effectiveness movement suggests it has not done it well. Furst-Bowe and Bauer (2007) went as far as to suggest that the Malcolm Baldrige Criteria would provide postsecondary institutions with an effective model for guiding and managing assessment and improvement. Since the MBNQA inception, three higher education institutions have applied and won the award: the University of Wisconsin-Stout, the Monfort College of Business at the University of Northern Colorado, and Richland College of the Dallas County Community College District, which is accredited by SACSCOC.

The Transition to the Excellence in Higher Education Framework

In spite of the adjustments made to the original Baldrige model, it was still difficult to use to exhaustively address the needs of a diverse higher education (Ruben, 2007). Therefore, scholars at Rutgers University developed the Excellence in Higher Education (EHE) framework in 1994. Updated periodically like the Baldrige model, the EHE framework borrowed assessment, planning, and improvement approaches both from the Baldrige model as well as from higher education accrediting agencies. The EHE framework is based on seven criteria that are considered appropriatefor the effectiveness of an educational organization or any of its parts (Ruben, 2007):

- Category 1: Leadership – how leadership practices foster excellence, innovation, focus on stakeholders' needs, are assessed and improved.

- Category 2: Purposes and Plans – how the institution's mission, vision, and values are created, shared, and implemented in coordination with faculty and staff.
- Category 3: Beneficiaries and Constituencies – how the institution identifies stakeholders' needs, perceptions, and priorities and uses that information to satisfy those stakeholders.
- Category 4: Programs and Services – how the institution reviews and maintains the quality and effectiveness of its programs as well as operational and support services.
- Category 5: Faculty/Staff and Workplace – how the institution attracts and keeps excellent and engaged faculty and staff, develops and maintains a positive culture and climate within the work environment, and encourages faculty and staff to develop personally and professionally.
- Category 6: Assessment and Information Use – how the institution assesses the extent to which it is fulfilling its mission and how it uses assessment results to inform decision making and make improvements.
- Category 7: Outcomes and Achievements –how the institution documents evidence of quality and effectiveness.

Interconnections between the various categories of the EHE framework are illustrated in Figure 1.2.

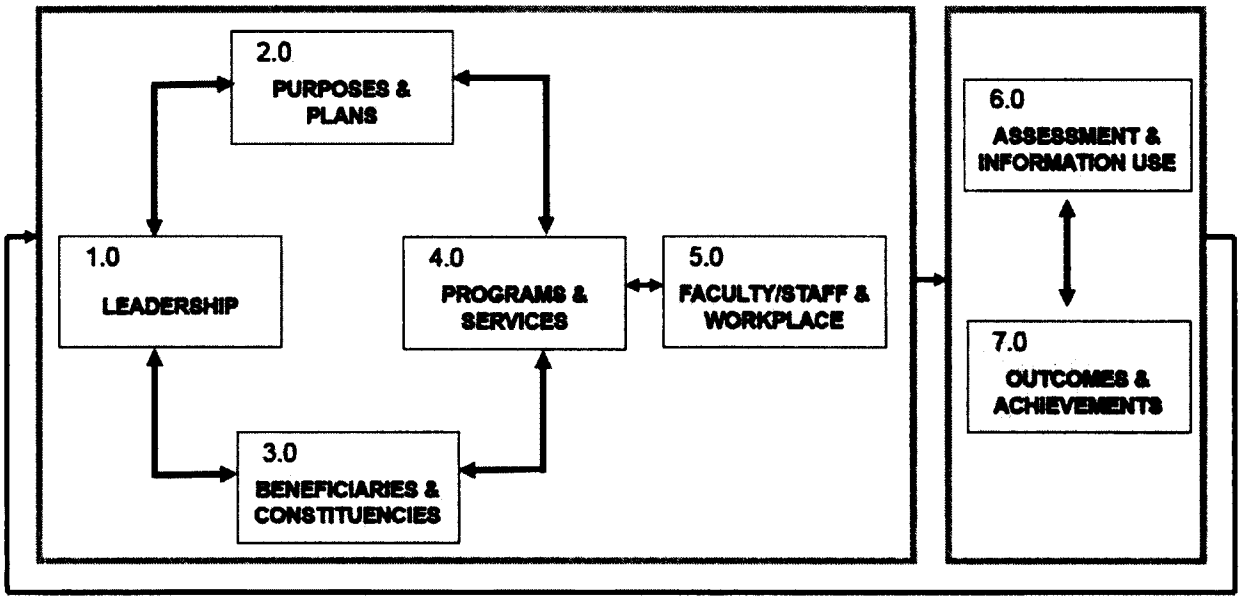

Figure 1.2. Excellence in Higher Education Framework. Adapted from "Higher education assessment: Linking accreditation standards and the Malcolm Baldrige criteria," by B. D. Ruben, 1994, *New Directions for Higher Education, 137*, p. 70. Copyright 2005 by the National Association of College and University Business Officers.

AlthoughFigure 1.1 shows that the authors of the Malcolm Baldrige model intended to group its seven dimensions into three larger components (driver, systems, and outcomes), such a compartmentalization was not explicit with the EHE framework. However, in light of the driver, systems, and outcomes components of the Malcolm Baldrige model,a closer look at the EHE model suggests it too could be subdivided into three modules, perhaps into input, environment, and output.

The Input-Environment-Outcome (I-E-O) Model

First introduced by Astin in 1993, the I-E-O model is a conceptual guide for assessing the effectiveness of activities not only in higher education, but in most social or behavioral science areas as well (Astin, 1993; Astin & Antonio, 2012). Astin and Antonio (2012) argued that any educational assessment would be inadequate if it did not take into account input data, outcome data, as well as data about the educational environment in which student experiences occur. Educational institutions would be

bound to take incorrect actions if their decisions were not based on data analysis from all three elements of the I-E-O framework: input, environment, and outcome. For example, the fact that the number of program or college graduates that earn advanced degrees does not tell much about the effect of the program or college illustrates the point that inputs must be considered when evaluating outcomes. Likewise, educational outcomes could not be maximized if we had data on inputs and outputs, but limited or no understanding about the characteristics of the program or college environment. Input and output data are data about a particular student at the beginning and the end of an assessment, respectively. Environment data are data about the experiences to which the student would have been exposed. The I-E-O model is depicted in Figure 1.3 below.

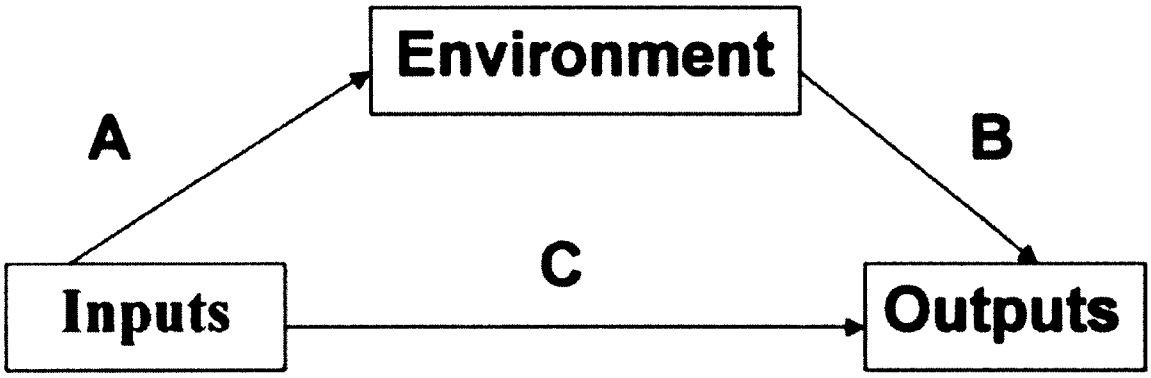

Figure 1.3. The I-E-O Model. Adapted from "Assessment for excellence. The philosophy and practice of assessment and evaluation in higher education (2nd ed.)," by A. W. Astin and A. L. Antonio, 2012, p. 20.

The three arrows A, B, and C illustrate the relationships between the three components of the model. Arrows A and C show that inputs can be related to both the environment and the outputs. They depict the fact that (a) different students often end up in different environments - arrow A and (b) different student inputs tend to lead to different outcomes – arrow C. Arrow B represents the effect the environment has on

student outcomes. Astin and Antonio (2012) observed that arrows A and C imply that different inputs affect the relationship between environment and outputs differently. That is, different inputs lead to different interactions between environment and outputs.

The Connection between the EHE Framework and the I-E-O Model

Both the EHE and I-E-O models are interested in factors or approaches that lead to improving higher education. They are both about optimally adjusting relevant factors in order to achieve maximum student outcomes. Each of the seven categories of the EHE can be classified under one or more of the three components of the I-E-O framework. Though, it is fair to say that some EHE categories would be easier to classify under inputs, environment, or outputs than others. For example, Category 2 – Purposes & Plans and Category 7 – Outcomes & Achievements can easily be classified under Outputs. With the exception of Category 3 -Beneficiaries & Constituencies (which includes students) and Category 6 – Assessment & Information Use, all of the remaining categories can as easily fit under Environment. Categories3 and 6 appear to be exceptions because they can be classified under inputs, environment, or outputs. The rationale for this is the fact that assessment and information use occurs at the input, environment, and the output levels. Although adding Category 3- Beneficiaries & Constituents under each I-E-O component is not as clear, given that students are key beneficiaries and constituents, student data comprise much of inputs and outputs. Students also shape the environment in which they live and learn. This is in line with Astin and Antonio's (2012) argument that environmental experiences can often be adequately classified both as input as well as outcome variables.

The resulting combined model is shown in the below Figure 1.4.

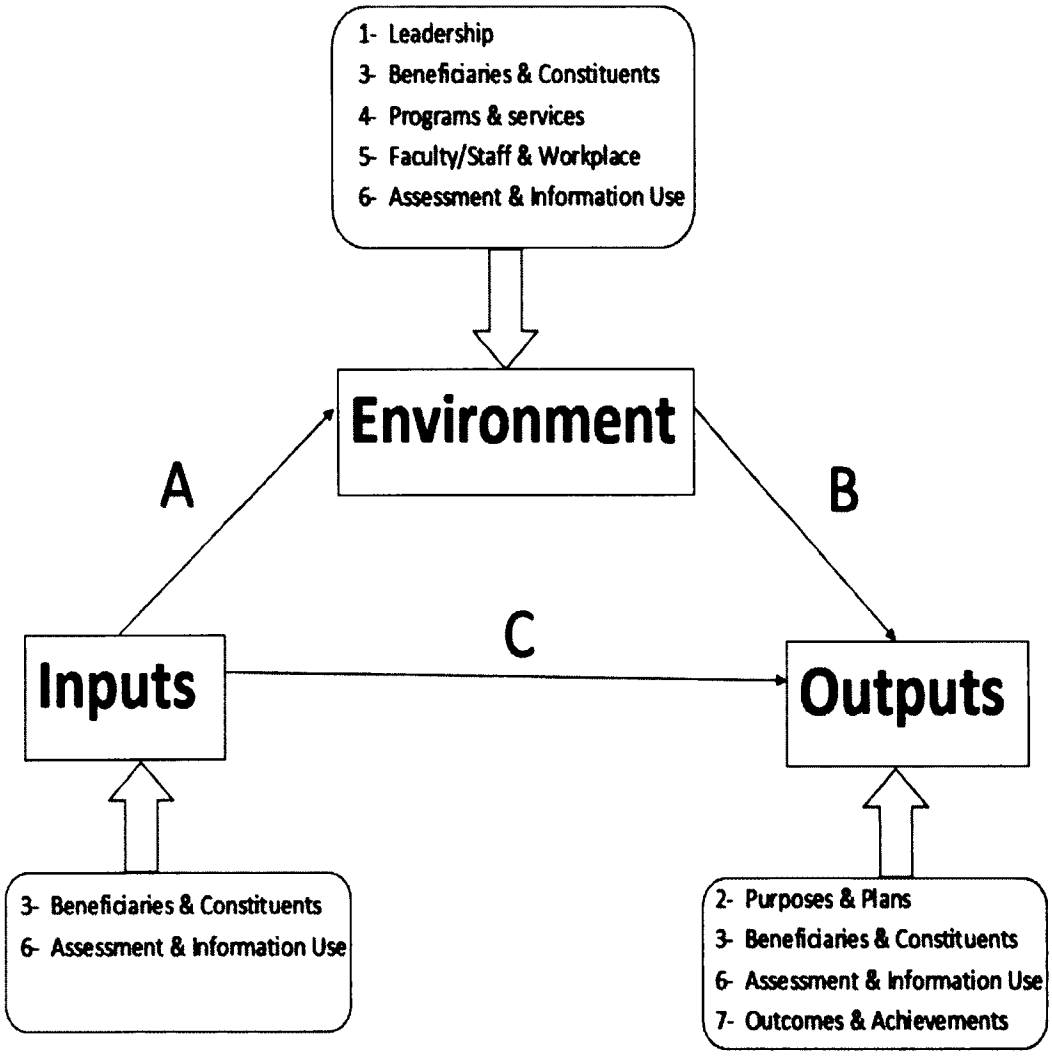

Figure 1.4. Combined EHE/I-E-O model

For this study, the combined EHE/I-E-Oframework will serve as a lens for examining the quality of higher education institutions accredited by SACSCOC, just as the Malcolm Baldrige was used in an effort to address the declining quality of U.S. goods and services in the early 1980s. The study will specifically focus on SACSCOC's review of institutional effectiveness and compare the results to some student and institutional characteristics commonly associated with quality by higher education stakeholders such as parents and other taxpayers.

Significance of the Study

Findings from this study willpotentially address several stakeholders' concerns. First, potential relationships between accreditation status based on institutional effectiveness requirements and some of the common student and institutional variablescould help students and their parents make better informed decisions about where to go to college. Second, colleges and universities could use any potential relationships as early warnings or opportunities and react accordingly. Lastly, SACSCOC could investigate redefining institutional effectiveness review processes if there are no clear differences in patterns between non-compliant schools and their compliant counterparts.

Research Questions

The following research questions are aimed at exploring potential relationships between SACSCOC school accreditation status based on institutional effectiveness and some common student and institutional measures cited in the literature. Particularly, of all SACSCOC baccalaureate member institutions that were reviewed between 2008 and 2012:

- What is the relationship, if any, between their accreditation status based on IE requirements and the most common student variables (selectivity, student-to-faculty ratio, retention rate, and graduation rate)?
- What is the relationship, if any, between their accreditation status based on IE requirements and nine common institutional variables(instruction expenses per FTE, academic support expenses per FTE, institutional supportexpenses per FTE, student service expenses per FTE, IT expenses per FTE, percent students

receiving state/local/institutional grant aid, percent students receiving federal loans, institutional level, and institutional type)?

- What patterns, if any, emerge that may inform institutional knowledge about the relationship, if any, between accreditation status based on IE requirements and some of the common student or/and institutional measures mentioned above?

Limitations and Delimitations

Most of the data used in this study came from institutions' self-reportsthat were publicly available through databasessuch as the Integrated Postsecondary Education Data System (IPEDS) as well as other sources such as EDUCAUSE and the institutions themselves that were reviewed by SACSCOC between 2008 and 2012 . As self-reported data, information from such sources may not be objective and could therefore impact the effectiveness of study findings. The next limitation of the study was the incompleteness of some of the data required for the analysis. That was due to the fact that some institutions reviewed by SACSCOC between 2008 and 2012 did not submit all of the required data by the deadlines. Another limitation of the study stemmed from SACSCOC's changes to the principles of accreditation related to Comprehensive Standard 3.3.1 between 2010 and 2012. Data analysis did not take into account the impact of the slight language difference between the two time periods.

In terms of delimitations, it would have been ideal to base the study on data from the past 10 years, because that would have included about 100 percent of schools reviewed by SACSCOC and consequently a larger sample. However, data for some of the study variables were only available in the selected 2008-2012 timeframe. Moreover, due to the imperfect nature of data collection processes for large databases such as

IPEDS, it was safer to relyon data collected in more recent years. For example, as of the 2011-2012 collection cycle, IPEDS has followed a three-step procedure for releasing data: (a) preliminary stage where data are published shortly after the data collection cycle closes; (b) provisional stage during which quality control procedures are applied to the preliminary data prior to publishing; and (c) final stage where data are published after provisional data revisions by institutions (Integrated Postsecondary Education Data System, 2014).

Summary

The quality of U.S. higher education has been called into question due to rising costs and decreasing competitiveness of college graduates. Those are some of the factors that have prompted accreditors – under growing pressure from various higher education stakeholders - to shift from using inputs and resources when judging the quality of an institution to requiring that colleges and universities demonstrate how much they are adding to the knowledge base of their students, a process called institutional effectiveness. Unfortunately, postsecondary institutions have struggled to show how they were fulfilling their mission. As a result, students and parents have continued to rely on old indicators of quality when choosing where to go to college.

The purpose of this study was to explore the relationship between accreditation status based on institutional effectiveness and some common student and institutional measures the public has come to rely on, when judging the quality of a college or university.The Excellence in Higher Education Framework (Ruben, 2007) and the I-E-O Model (Astin & Antonio, 2012) were used in conjunction to examine these relationships.

The next chapter will focus on the existing literature related to institutional effectiveness and accreditation in U.S. higher education.

Chapter Two: Literature Review

A scan of the relevant literature shows that the evolution of the U.S. regional accreditation processes in the past four decades has been remarkable. Even more so has been the recent shift to require institutional effectiveness as a result of increasing accountability demands. With calls for institutions of higher education to be more accountable has come the need for colleges and universities to develop an assessment culture for the purpose of demonstrating they are not only fulfilling their respective missions, but constantly improving as well. In examining how postsecondary institutions, particularly those accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACS), have dealt with the requirement to demonstrate institutional effectiveness, this literature review will help highlight the importance of investigating institutional effectiveness-based accreditation actions. To that end, the literature review will focus on the following six themes: (a) the history of the accreditation process in the U.S.; (b) the development of the U.S. accountability movement; (c) the need for a culture of assessment; (d) the transition to the institutional effectiveness movement; (e) the institutional effectiveness challenges in higher education; and (f) a review of accreditation-related empirical studies.

History of the Accreditation Process in the U.S.

The benefits of higher education to society are undeniable; from the immense contributions to postsecondary students' personal and professional lives to the enrichment of many aspects of life at the local, state, national, and even international levels, those

benefits are noticeable (Ruben, 2007). Thus, it is not surprising that studies show about 90 percent of high school students planned to earn a college degree while students older than 30 years of age have been the fastest growing group in higher education for the past 30 years (Lingenfelter & Lenth, 2005). Lingenfelter and Lenth (2005) attributed that trend to employers' increasing requirements for highly skilled and educated employees.

Accreditation in the U.S. was started in the nineteenth century as an external process to ensure colleges and universities met acceptable levels of quality (Dodd, 2004; Ewell, 2011b). Fagan and Wells (2000) reported that accreditation history can be traced as far back as 1867 through records from the Federal Department of Education. Founded in 1885, the New England Association of Schools and Colleges (NEASC) was the first U.S. accrediting organization (Brittingham, 2009). Brittingham (2009) stated that the NEASC was created by a coalition of secondary and postsecondary leaders - including Charles Eliot, Harvard University's President – to ensure pre-college students readiness for higher education. From their early days, accreditation agencies have been funded through dues and fees from member institutions (Brittingham, 2009; Eaton, 2009).

Accreditation evolved into a voluntary, self-regulatory, and non-governmental system (Kincaid & Andresen, 2010)in the 1930s (Brittingham, 2009). However, it is not until the 1940s and after the passage of the GI Bill by Congress that accreditation also started serving as gatekeeper for federal funding of higher education (Neal, 2008). By the 1950s, accrediting agencies had the dual role of fostering quality improvement among its member institutions and serving as quality assurance agents for the same institutions (Brittingham, 2008; Dodd, 2004). Despite its massive investment in financial aid funds, the federal government deliberately chose neither to directly regulate the quality of

postsecondary education, nor to ensure that the funds were properly managed, but rather to leave those tasks to accrediting agencies (Baker, 2002; Brittingham, 2008; Eaton, 2007; Ewell, 2011b; Head & Johnson, 2011). Public trust in accreditation grew as self-regulated accrediting agencies avoided becoming government contractors while including requirements to address public concerns about transparency and achievement of student outcomes (Brittingham, 2008).

In order for an accrediting agency to qualify to do the job, it had to be certified annually by the U.S. Secretary of Education. Through such an arrangement, Congress wanted to avoid exerting an undue amount of external pressure on colleges and universities, but at the same time it wanted to ensure accountability (Neal, 2008). The National Advisory Committee on Institutional Quality and Integrity (NACIQI) is the branch of the U.S. Department of Education (USDOE) that certifies accreditors are fit to serve as gatekeepers for Title IV funding, which is based on the 1965 Higher Education Act (HEA) (Ewell, 2011b; Schmadeka, 2012). As a result of the HEA, most higher education institutions have depended on accreditation to survive, because only students attending postsecondary institutions accredited by USDOE-approved accreditors are eligible to receive federal financial aid (Schmadeka, 2012).

The Council for Higher Education Accreditation (CHEA) is an independent organization that approves accrediting agencies (Kincaid & Andresen, 2010; Head & Johnson, 2011), just as the USDOE does. CHEA (2013) describes itself as the sole nongovernmental postsecondary organization in the United States that (a) advocates for accreditation and quality assurance to the U.S. Congress and USDOE; (b) advocates for accreditation to the general public, opinion leaders, students and families; and (c)

represents the U.S. accreditation system outside the United States. With a membership estimated to be around 3,000 degree-granting higher education institutions and 60 accrediting agencies, CHEA is controlled by a 20-person board composed of postsecondary institutions' presidents and representatives as well as public members (CHEA, 2013).

Accreditation is not without criticism.Although shortcomings of the accreditation process were publicized in the 2006 Spellings' Report on the Future of Higher Education (Commission on the Future of Higher Education, 2006; Neal, 2008), Dodd (2004) pointed out that the accreditation system had been criticized for some time. Brittingham (2008) argued that despite doing a decent job helping member institutions improve, accreditation had not done so well getting those institutions to be accountable. The financial aid scandals from the 1990s led Congress to conclude that accreditation had failed in its role as gatekeeper for federal funds and needed to be reformed (Crow, 2009). It is not surprising that in more than six decades, only a handful of institutions have been closed and just one accrediting agency has been found inadequate in the past 12 years (Neal, 2008). Neal (2008) called the self-regulatory feature of accreditation "a closed and collegial system more concerned with sustaining itself than with enhancing the quality of higher education" (p. 28). Lederman (2014) echoed that sentiment when he suggested that the peer-review system of accreditation has been called out for not doing enough about poor-performing colleges and universities.

Another criticism of accreditation has been the heavy cost incurred by and the burden imposed on member institutions (Head & Johnston, 2010). There has been some push-back on this criticism however, because accreditation relies heavily on volunteers.

This is exemplified by the 3,500 volunteers supervised by 105 full-time staff used to accredit 3000 colleges and universities in 2005 (Brittingham, 2008). Some critics of accreditation have called for a shift from a volunteer peer-review system to a professional one (Crow, 2009). Such a shift may either be too costly or lead to more government regulation of higher education (Lederman, 2014). As a result of the work of the 2006 Spellings Commission, which will be discussed further below, some noticeable changes are starting to occur with regional accreditation, notably the decrease of the accreditation cycle from 10 to seven years and the increased emphasis on objective data (Johnston, 2011).

One more criticism of regional accreditation is the relatively large number of regional accreditors in an era where many institutions of higher education are operating beyond state and even national borders. In echoing this criticism, Lederman (2014) wonders if colleges in the various regions operate so differently that they have to meet different requirements for their respective regional accreditors. A significant development to address some of this criticism has occurred as the Council of Regional Accrediting Commissions (C-RAC), which typically coordinates the work of the regional accreditors, recently announced the adoption of a glossary (Lederman, 2014). The glossary would include definitions of common terms that regional accrediting agencies use to describe actions and procedures taken against member institutions.

There are two main types of accreditation in the U.S.: institutional or regional accreditation and programmatic or specialized accreditation (Baker, 2002; Head & Johnson, 2011). While regional accreditation focuses on comprehensive evaluation of an institution (Volkwein, 2010a), programmatic accreditation is concerned with evaluation

of programs, courses of study, or courses within a college or university (Head & Johnson, 2011; Vaughn, 2002). National accreditation is a third type of accreditation, which mainly oversees faith-related and career-related institutions (Eaton, 2009; Volkwein, 2010a). Both the USDOE and CHEA recognize six accrediting agencies that accredit postsecondary institutions in their respective regions: the Middle States Commission on Higher Education (MSCHE); the New England Association of Schools and Colleges, Commission on Institutions of Higher Education (CIHE); the North Central Association of Colleges and Schools, The Higher Learning Commission (HLC); the Northwest Commission on Colleges andUniversities (NWCCU); the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC); and the Western Association of Schools and Colleges (WASC) (Dodd, 2004; Head & Johnson, 2011, Volkwein, 2010a). Regional accrediting agencies are regularly adjusting their processes in efforts to demonstrate the merits of the self-regulatory and peer review system in addressing the quality concerns that the public has had with higher education (Baker, 2002).

The Development of the U.S. Accountability Movement

Within the last 30 years, at least two high-profile studies about the condition of education in the U.S. have been conducted with the same result: the need for educational reform. The studies included President Reagan's National Commission on Excellence in Education (1983), which produced the report *A Nation at Risk: The Imperative for Education Reform.* A little over twenty years later, *A Test of Leadership: Charting the Future of U.S. Higher Education* was released by President George W. Bush's Secretary of Education's Commission on the Future of Higher Education (2006), also known as the

Spellings Commission(Ewell, 2011b). Having those studies in such a relatively short time period showed that higher education had become complacent about its role in society (Ruben, 2007). It also marked a turning point in a movement led by higher education's external stakeholders demanding that colleges and universities be held accountable for their outcomes (Head, 2011; Lingenfelter & Lenth, 2005; Welsh & Metcalf, 2003a). The federal government's role in the accountability movement was not only driven by the need to protect its massive financial investment in higher education (Ewell, 2011b; Vaughn, 2002), but also by the increasing public perception that its intervention was necessary (Eaton, 2007). By announcing a 2015 ratings system for higher education institutions in August 2013, President Obama appeared to have heeded the public suggestion.

The National Commission on Excellence in Education was established on August 26, 1981 by the U.S. Secretary of Education for the purpose of investigating and solving problems affecting education in the United States. The Commission was created out of the Secretary's concern about the increasing loss of confidence in our educational system by the public (National Commission on Excellence in Education, 1983). One of the Commission's report's key findings was that, while the average citizen of 1983 was more educated and knowledgeable than prior generation's average citizen, the average high school and college graduate in 1953 was better educated than 1983's average graduate. The report also found that the United States' once secured position as leader in the "global village" was now threatened by well-educated and highly motivated competitors. The Commission urged a reform of the educational system if the U.S. wanted to stay competitive in today's "information age" (National Commission on Excellence in

Education, 1983, p. 10). Reform recommendations for higher education included raising admission standards as well as developing higher expectations for student learning and assessing their achievement.

Twenty-three years later, Margaret Spellings, then Secretary of Education, received a report from her Commission on the Future of Higher Education. While the 1983 National Commission on Excellence in Education was concerned with U.S. education in general, the 2006 Commission on the Future of Higher Education focused solely on higher education (Eaton, 2007; Liu, 2011b). The Spellings Commission's findings sounded familiar: although it found enough commendable features of the U.S. higher education system, it urged the need for reform. Several factors contributed to the sounding of that alarm: the U.S. no longer led the world in educational attainment and U.S. college graduates no longer performed to employers' satisfaction. Eaton (2007) suggested that the Spellings Commission had the most effect on accreditation, which it criticized for lacking rigor, failing to adequately address student achievement, not fostering innovation, failing to provide a way to compare institutions, and being ineffective at providing information about academic quality. Recommendations from the Spellings Commission included the development of a culture of accountability, innovation, and quality improvement in order to meet the challenges of the 21st century (Commission on the Future of Higher Education, 2006).

Less than ten years later, the Postsecondary Institution RatingsSystem (PIRS) proposed by President Obama on August 2013 would be under the purview of the USDOE and will start rating colleges and universities in 2015 and link financial aid to those ratings three years after that (Miller, 2013). Considering that the USDOE can enact

regulations without vetting them through Congress, Miller (2013) argued that although congressional approval would be necessary to link financial aid to the ratings, the implementation of the announced PIRSwas very probable. Miller (2013) suggested that such a system should (a) include input from the higher education community, (b) address potential unintended consequences, and (c) prevent gaming of the system by mixing factors institutions can easily control,such as lowering academic standards to increase completion rates,with those over which they have little to no control,such as alumni earnings or job outcomes.

There are two potential consequences, should higher education not respond appropriately to the accountability demands: (a) accountability standards will be mandated from outside academia and (b) public confidence in postsecondary education will gradually slip away (Carey, 2007). In the meantime, without a reliable self-regulatory system of accreditation, colleges and universities will have to deal with increased regulation in the form of new requirements resulting from the HEA reauthorization (Brittingham, 2008). However, in fairness to higher education, Lingenfelter and Lenth (2005) warned that regulators should not totally blame postsecondary institutions for student learning outcomes, because institutions do not have as much control on the quantity and quality of student learning as they do on student admission and retention. The fact remains that, until higher education gets better at providing research data that inform internal decision making and external stakeholders (Welsh & Metcalf, 2003c), it will be unable to compete for funding against other social programs such as Medicaid, K-12 education, and public safety (Carey, 2007).

Data from the Organization of Economic Cooperation and Development (OECD) show that as of 2013, the U.S. was13thin terms of educational attainment in the 25-34 age range (OECD, 2013). Asserting that the U.S. was once the most educated country in the world, Kanter (2011) blamedthe declining trend in ranking to the fact that educational achievement in the U.S. has stagnated while improving in other countries. In reaction, U.S. higher education institutions are aiming to reconquer the top rank in education achievement in the world by moving up from the current mid-40s to 60 percent attainment rate by 2020 (Kanter, 2011; Liu, 2011b). This response is just joining those of various higher education stakeholders, both from within and outside the academy, who, for the past 30 years, have pressured colleges and universities to demonstrate how they were accomplishing their missions (Kanter, 2011; Sullivan & Wilds, 2001). Increasing calls for accountability have ushered in a new era of accreditation with input measures such as size and reputation no longer enough to show that an institution is fulfilling its purpose (Alfred, 2011; Astin & Antonio, 2012). With accountability becoming an expectation of higher education in this era, not only has the focus on outcomes assessment grown manifold (Liu, 2011b), but accreditation requirements have been aimed at fostering a culture of assessment (Andrade, 2011).

The Need for a Culture of Assessment

Head (2011) pointed out that accountability calls started in the 1970s with declining higher education funding and enrollment that led to external stakeholders asking that colleges and universities be held liable for their outcomes. Demands for accountability in postsecondary education intensified in the late 1980s, resulting in tougher accreditation standards (Ewell, 2011b) and marking the beginning of the

assessment movement (Kincaid & Andresen, 2010). As mentioned above, one of the reasons for the pressure on higher education was the decline in U.S. international competitiveness and the evidence showing a positive correlation between the quality of a country's higher education system and its performance on global markets.

As a result, around the same period, accrediting agencies began making the argument to postsecondary institutions that, if the latter's most important purpose was to educate students, then a key requirement for accreditation must be to show how much they were adding to the knowledge base of their students (Sullivan & Wilds, 2001). Given the increased focus on outcomes assessment in higher education from multiple sources in the past decade (Astin & Antonio, 2012; Liu, 2011b), not only has accountability become a postsecondary education expectation, accreditors' requirements have aimed at fostering an assessment culture (Andrade, 2011). Moore (1986) warned that assessment and accountability were here to stay and higher education stood a chance of losing public confidence if it did not find ways to improve quality and effectiveness.

Assessment is commonly defined as the ongoing collection, analysis, and use of data for the purpose of improving (Astin & Antonio, 2012; Baker, 2002; Banta & Associates, 2002; Ohia, 2011; Suskie, 2009; Volkwein, 2010a).Assessment is also often associated with outcomes measurement, evidence-based classroom learning evaluation, institutional effectiveness and efficiency, transparency and standardization of evaluative criteria and processes, measurement of value-added, external regulation and accountability (Ruben, 2007). Assessment and institutional effectiveness gained popularity around the same time, but the former had a narrower scope due to its focus on student learning and development (Ewell, 2011b). Outcomes assessment became an

accreditation requirement within the context of the 1992 reauthorization of the Higher Education Act. Ruben (2007) posited that very few people either within or outside higher education would argue with the benefits of assessment if assessment were described in the right context. The reality is, postsecondary institutions have been challenged by assessment practices mandated by accrediting agencies (Ewell, 2011b).

Higher education's struggle with accreditation is less about showing evidence of improvement resulting from assessment, and more about demonstrating that its assessment processes are robust enough to produce satisfactory results (Brittingham, 2008). When assessment is properly implemented, colleges and universities can benefit internally through program and service improvement (Ohia, 2011). Shulman (2007) argued that assessment has the potential to enhance pedagogical practices, facilitate responses to external stakeholders, and be used on an ongoing basis, if it is embedded in instruction. Unfortunately, recent external pressures on postsecondary institutions are tilting the purposes of assessment more toward satisfying external audiences than spawning internal improvements (Hanson & Mohn, 2011). In order to ease the tension between assessing for internal improvement and assessing for external accountability, colleges and universities should see the two opposing tendencies as "the inspirational versus the pragmatic;" that is, doing assessment because they want to enhance student learning and grow as opposed to assessing because they were told to do it (Volkwein, 2010b, p. 4). Volkwein (2010b) warned that, in an era of resource scarcity, higher education institutions that develop an assessment culture will have a competitive advantage for students, faculty, as well as other resources. There have also been differing

opinions about what assessment of student learning can and should be, mostly between proponents and opponents of standardized tests (Beyer & Gillmore, 2007).

Kincaid and Andresen (2010) asserted that disagreements about the nature of assessment in higher education have created some tensions between government regulators and accrediting agencies. On the one end of the debate, proponents of standardization, fueled by the Spellings Commission report, recommended standardized testing to assess student learning (Beyer & Gillmore, 2007). Opponents of standardization on the other hand argued that standardized tests would work against the institutional diversity that characterizes U.S. colleges and universities (Brittingham, 2008; Kincaid & Andresen, 2010). Opponents of standardization saw their claim boosted by a study by the Council of Presidents and State Board for Community College Education (1989) which showed that standardized tests neither measured student learning nor yielded actionable data that faculty could use to improve teaching and learning (Beyer & Gilmore, 2007). While they acknowledged the merit of higher education accountability to its constituents, Beyer and Gilmore (2007) cautioned that relying on simplistic measures to capture complex and seldom linear student learning processes, would end up doing more harm than good, as they would inevitably chip away from already scare resources.

There has been some encouraging news about assessment in higher education, which is an industry known for its slowness in adopting change (Andrade, 2011; Brittingham, 2008). Although the development of a genuine assessment culture has not been linear in postsecondary education, it has been impressive in some colleges and universities (Andrade, 2011; Brittingham, 2008). Successful implementation of

assessment in higher education requires faculty involvement, because of the role faculty play in student learning (Andrade, 2011; Kuh and Ikenberry, 2009). Celebrating assessment milestones through sharing success stories and rewarding assessment excellence could go a long way in developing an assessment culture (Andrade, 2011).

Despite some assessment successes, higher education institutions have also been engaging in assessments that have produced no actionable data (Astin & Antonio, 2012; Head & Johnson, 2011). As Volkwein (2010a) explained, instead of sharing assessment results and acting on them, colleges and universities have been content with just gathering data and not using them to inform decision making. This state of affairs has made it hard for postsecondary institutions to justify how they were accomplishing their missions (Todd & Baker III, 1998). As a result, under pressure from their various stakeholders, colleges and universities have been required by accrediting agencies to engage in assessment activities aimed at documenting how they were meeting expectations, thereby demonstrating institutional effectiveness (Head & Johnson, 2011; McLeod & Atwell, 1992).

The Transition to the Institutional Effectiveness Movement

The concept of institutional effectiveness truly took shape when public demands for higher education accountability went beyond financial accountability to encompass expectations for results and effective performance in the late 1970s (Head, 2011; Moore, 1986). That level of demands was the consequence of several factors including higher costs of attending college and university as well as underemployment amongst and employer dissatisfaction with college graduates (Head, 2011). Head (2011) suggested that it was not until the mid to late 1980s that institutional effectiveness as we know it

today was introduced to postsecondary education when SACSCOC made it an accreditation requirement. For that reason, SACSCOC is considered a leading force in using institutional effectiveness to address public calls for higher education accountability (Skolits & Graybeal, 2007; Welsh & Metcalf, 2003a). As demands for better quality in higher education continued to grow, other regional accrediting agencies followed SACSCOC by gradually adding institutional effectiveness as an accreditation requirement (Moore, 1986). As of 2011, not only was assessment of institutional effectiveness a key piece of the accreditation process (Ohia, 2011), all six regional accrediting agencies required institutional effectiveness as a condition for initial accreditation or reaffirmation (Head, 2011; Welsh & Metcalf, 2003a). Dodd (2004) suggested the shift had reached the national level as all accrediting bodies have started emphasizing learning outcomes achievement instead of compliance with standards. Thus, it is fair to say that accreditation processes drive institutional effectiveness (Head & Johnson, 2011). Such processes are intended to demonstrate that higher education institutions are accomplishing their missions (Welsh & Metcalf, 2003a).

Just as they frequently do when making decisions about where to spend their money in other areas of life, parents and students look for comparative information about quality to inform their school choices (Cameron, 1986; Liu, 2011b). Studies show that whenever direct measures of student learning are not available, parents and students would judge the quality of an institution based on any indicators they can easily access (Cameron, 1986). Students and their parents have done such research in efforts to maximize the return on their higher education investment (Middaugh, Kelly, & Walters, 2008). Over the years, a new paradigm for institutional quality has emerged with the

growth of accountability demands (Alfred, 2011). In keeping pace with that movement, accrediting agencies began expanding from focusing on input and resource standards to using measurable outcomes to judge institutional effectiveness (Head, 2011; Moore, 1986; Volkwein, 2010b).

Prior to the institutional effectiveness paradigm, indicators of quality included transfer, graduation, or retention rates (Cameron, 1986; Welker & Morgan, 1991), and selectivity (Moore, 1986; Pascarella et al., 2006; Stearns, Potochnick, Moller, & Southworth, 2010). Although Kuh and Pascarella's (2004) study found that institutional selectivity only had a weak effect on undergraduate achievement, they reported that selectivity was considered by some an indicator of educational quality on the basis that exposure to bright students led to high graduation rates, but also correlated positively to good learning outcomes and higher post-college earnings. Indicators of quality also included institutional or environmental measures such as student-to-faculty ratios and instruction expenses per full-time equivalent (FTE) student (Middaugh, Kelly, & Walters, 2008). With today's millennial students who are thought to connect and interact better through technology, studies show that how well an institution integrates technology in their pedagogical approaches is another indicator of quality (Andrade, 2011; Jones & Wellman, 2010). The role of technology in developing 21st century knowledge workers who are lifelong learners is so important that the U.S. Department of Education has devised a plan that would use technology as a lever to improve student learning (Kanter, 2011).

Under the new paradigm mandated by the federal government, both accrediting agencies and colleges and universities are expected to show more evidence of student

achievement and institutional performance, make that information publicly available, facilitate comparisons of institutions, and create minimum standards of higher learning (Eaton, 2007). The government mandate to include outcomes assessment in the accreditation process came through the reauthorization of the Higher Education Act in 1992 (Schmadeka, 2012). Unfortunately, colleges and universities continue to be challenged in developing dependable measures of academic and student outcomes performance (Volkwein, 2010b). Volkwein (2010b) pointed out that most postsecondary institutions still rely on factors such as retention and graduation rates, student-to-faculty ratios, and expenses, which students and parents continue to use as indicators of quality. Understanding the factors that characterize a quality higher education is important because of the role postsecondary education plays in positioning a nation and its citizens in today's global economy (Liu, 2011b; Vaughn, 2002). Accrediting agencies have become more rigorous in requiring institutions to demonstrate that they are adding value to their students' learning (Moore, 1986).

As more colleges and universities embrace institutional effectiveness (McLeod & Atwell, 1992), those that would like to stay competitive will have to adopt creative approaches in order to meet the institutional effectiveness expectations of their stakeholders (Babaoye, 2006). Postsecondary institutions have responded to the quick rise to prominence of institutional effectiveness by embedding the concept in their strategic plans (Goben, 2007). Requirements for institutional effectiveness vary from one accrediting agency to another (Welsh & Metcalf, 2003a). For example the North Central's Higher Learning Commission uses its Academic Quality Improvement Program (AQIP) to highlight institutional effectiveness while the Southern Association of Colleges

and Schools Commission on Colleges (SACSCOC) requires its members applying for reaffirmation to produce a Quality Enhancement Plan (QEP) (Brittingham, 2008). Since SACSCOC is considered a pioneer in the institutional effectiveness movement (Todd & Baker III, 1998), it is appropriate to focus on the introduction of institutional effectiveness in higher education as well as SACSCOC's role in that movement.

SACSCOC'sRole in the Institutional Effectiveness Movement

Not only is SACSCOC credited with introducing institutional effectiveness in higher education, it has also been more rigorous in its approaches than its accrediting peers (Skolits & Graybeal, 2007; Welsh & Metcalf, 2003b). What ledSACSCOC to the paradigm shift? Specifically, why did SACSCOC move away from assessing input and resource adequacies when judging the quality of an institution to requiring member colleges and universities demonstrate institutional effectiveness?As indicated above, SACSCOC began emphasizing institutional effectiveness toward the mid to late 1980s. During that timeframe, U.S. academics, business, and government leaders were working together to address the decline in the quality of the country'sgoods and services, which caused the United Statesto lose its competitive edge in the global economy (Belohlav, Cook, & Heiser, 2004; DeCarlo & Sterett, 1995).

The collaboration produced the Malcolm Baldrige model, which later inspired the Excellence in Higher Education framework (Ruben, 2007), as described in detail in Chapter One. The goal of the Malcolm Baldrige model was to promote assessment practices leading to performance excellence and continuous improvement (Belohlav et al., 2004; Ruben, 2007). Furst-Bowe and Bauer (2007) reported that the Malcolm Baldrige influenced SACSCOC's quality enhancement plan (QEP) as well as the Higher

Learning Commission of the North Central Association of Colleges and Schools' Academic Quality Improvement Program (AQIP). Both the QEP and the AQIP were implemented by their respective regional accrediting agencies for the purpose of improving educational quality of member institutions.

Adequately addressing concerns with student learning achievement cannot be done without engaging in the process of institutional effectiveness, which SACSCOC defines as "ongoing, integrated, and institution-wideresearch-based planning and evaluation processes that (a) incorporate asystematic review of institutional mission, goals, and outcomes; (b) resultin continuing improvement in institutional quality; and (c) demonstratethe institution is effectively accomplishing its mission" (SACSCOC, 2012, p. 13). The above definition is based on SACSCOC's Core Requirement 2.5 (CR 2.5). In reviewing an institution's compliance with CR 2.5, SACSCOC reviewers look for documentation describing the institutional effectiveness process as well as evidence of assessments not only showing the institution is fulfilling its mission, but also resulting in continuing improvement. While CR 2.5 is concerned with institutional-level effectiveness, Comprehensive Standard 3.3.1.1(CS 3.3.1.1) focuses on institutional effectiveness at the educational program level, which is the requirement for whichmost SACSCOC schools receive sanctions (Head & Johnson, 2011; Sullivan & Wilds, 2001). As noted in Chapter One, the QEP is another institutional effectiveness requirement that has to be met by SACSCOC member institutions applying for reaffirmation. The QEP, which is summarized under CR 2.12 and CS 3.3.2, is due four to six weeks prior to an on-site SACSCOC review. Under CR 2.12, a SACSCOC college or university must develop improvement plans based on assessment results and ultimately demonstrate how it is

fulfilling its mission through learning outcomes or academic support services.CS 3.3.2 ensures thatthe institution under review (a) has resources and processes for producing the QEP, (b)develops and implements its QEP with adequate stakeholders representation, and (c) establishes goals as well as an assessment plan for achieving them (SACSCOC, 2014a). According to Sullivan and Wilds (2001), two components of institutional effectiveness,(a) student outcomes identification, and (b) curriculum and instruction improvements resulting from assessment results,were the main reasons colleges and universities were cited by accreditation site review teams.

Institutional Effectiveness Challenges in Higher Education

Studies suggest there are many challenges to implementing institutional effectiveness in higher education (Ohia, 2011), where standardized and simple quality control systems have proven to be inadequate in evaluating a diverse education system resulting from a diverse society (Volkwein, 2010b). Factors that negatively affect faculty engagement in institutional effectiveness activities include lack of time, experience with institution-wide work, and authority to make changes to the processes (Hom, 2011). Although faculty workloads as well as faculty members' lack of authority in altering institutional effectiveness processes are often cited as reasons for their lack of participation (Hom, 2011), Nichols (1995) and Birnbaum (2000) argued that faculty resistance is the principal reason for institutional effectiveness failure. Cameron (1986) has supported that argument. Faculty may feel helpless in altering institutional effectiveness processes when metrics for such activities are defined by administrators (Cameron, 1978; Hom, 2011). Different perceptions about the definition as well as the sources of the definition are also impediments to institutional effectiveness

implementation (Cameron, 1978; Hom, 2011; Volkwein, 2010b). Based on the fact that it is not easy to reach a common understanding on criteria that allow a reliable evaluation of all colleges and universities, Baker (2002) found those who have proposed one-size-fits-all approaches to institutional effectiveness in higher education misguided.

Among barriers to institutional effectiveness in postsecondary education, the existence of many internal and external institutional effectiveness stakeholders (Hom, 2011) makes it difficult to gain the interest and support of institutional players (Welsh & Metcalf, 2003a) such as faculty and staff. The suspicion that institutional effectiveness has been imposed by external stakeholders such as the federal government and accrediting agencies is also a drag on institutional effectiveness efforts (Head & Johnson, 2011; Welsh & Metcalf, 2003b). This might not be a concern if colleges and universities took initiatives to develop and document assessments that led to defensible internal improvements (Volkwein, 2010b; Welsh & Metcalf, 2003c).

Regardless of the source of contention, Todd and Baker III (1998) warned that institutional effectiveness was here to stay, because of the increasing public demands for accountability in higher education. Thus, college and university administrators must provide effective leadership, starting with clearly defined mission statements (Moore, 1986) and championing assessment activities aimed at demonstrating their institutions are fulfilling such missions. Cameron (1986) conceded that "agreement to disagree" (p. 544) was the only consensus about institutional effectiveness; the consensus would allow colleges and universities the flexibility to develop justifiable models of effectiveness. Such models would be defensible so long as postsecondary institutions have documentation of student outcomes assessment consisting of both qualitative and

quantitative measures demonstrating institutional mission accomplishment (Volkwein, 2010b).

Accreditation-Related Empirical Studies

Not only are there few empirical studies about accreditation-related processes, there are fewer studies involving the SACSCOC region, and even fewer investigating institutional effectiveness and accreditation. However, there are several studies with findings that inform the present research. Theule (2012) found that although student variables are more likely to be significantly correlated to accreditation status than institutional variables, "accreditation is still a nuanced, individuatedassessment of individual institutions and not something that can be strongly predicted using institutional or student data alone" (p. 120). Roland's (2011) and Hoover's (2009) studies had a similar finding to Theule's assessment. Roland (2011) recommended that an institution seeking accreditation or re-accreditation hire an external consultant with experience in successful accreditation visits with the institution's accreditor. While acknowledging that being different is neither necessarily positive nor necessarily negative, Hoover's (2009) study posited that society was better off with diverse approaches to student learning outcomes, rather than a standardized approach. Hoover (2009) went as far as to suggest that to "infringe upon the unique set of student outcomes of a given college or university would be to deny their identity" (p. 148). In fact, regional accrediting agencies have used this argument to justify why they should operate independently (Lederman, 2014).

Though recognizing the merits of accreditation processes and procedures, public two-year college administrators saw a need for consistency in the peer review process, especially with respect to information and communication from accrediting agencies

(Hollingsworth, 2010). Hunnicutt's (2008) research came to a somewhat similar conclusion as it found that inconsistencies between policies and expectations for accreditation by the National Council for Accreditation of Teacher Education (NCATE) as well as expectations of the State Department of Education complicated the accreditation process. Moreover, Hunnicutt (2008) found that institutions where deans and NCATE coordinators had good working relationships tended to have more successful accreditation visits than those where the relationships were not as good. He also found that the source of NCATE coordinator appointments had an impact on the accreditation visit, as coordinators who had been appointed by the deans led to better working relationships.

Provezis (2010) had a slightly different research approach as he investigated the effect of accreditation on higher education. He concluded that not only was learning outcomes assessment an expectation of all regional accreditors, but also an expectation for which colleges and universities were increasingly being sanctioned. In order to avoid such accreditation sanctions, Diede's (2009) study offeredrecommendations for developing an assessment culture: (a) assessment should be the result of collaboration between administrators and faculty, but faculty should drive the process; (b) faculty should be given professional development opportunities focusing on assessment and learning outcomes; and (c) assessment results must be used to inform decision making.

Although all studies mentioned in this section speak to the need for further research on the topic of the effectiveness of accreditation processes, Theule's (2012) and Provezis' (2010) studies make the strongest case for the need for the present study. While Theule's (2012) study explores the impact of some common student and

institutional variables on Western Association of Schools (WASC) accreditation, Provezis' (2010) research found student learning outcomes assessment as the main reason for most regional accreditation sanctions. The case for information technology (IT)expenses was made by Mills (2008), who found that IT resources helped improve productivity at research institutions while merely helping recruit students and faculty at teaching-oriented colleges and universities.At the latter type of institutions, students and faculty relied on IT infrastructures for purposes other than teaching and learning (Mills, 2008). Since SACSCOC is considered a pioneer in the institutional effectiveness movement, a main component of which is about demonstrating that students are achieving the expected learning outcomes, investigating potential relationships between SACSCOC requirements for institutional effectiveness and some common student and institutional variables could have some practical implications. This study sought to add to the scant literature on institutional effectiveness and accreditation by examining such relationships.

Summary

Fueled by the declining confidence in the U.S. educational system, accountability demands over the past 40 years or more have prompted colleges and universities as well as their accreditors to react to the concerns of higher education institutions' external stakeholders. In responding to those concerns, accrediting agencies have been requiring member institutions to comply with institutional effectiveness requirements. Institutional effectiveness compliance calls for postsecondary institutions to engage in assessment activities for the purpose of demonstrating how they are fulfilling their missions and improving. Since the mid to late 1980s, SACSCOC has played a key role in the

institutional effectiveness movement. Although there have been few research studies about institutional effectiveness, a number of accreditation-related empirical studies have informed the current study, which is about investigating potential relationships between accreditation status based on institutional effectiveness and some salient student and institutional variables.

Accreditation originated in the U.S. in 1885 when the New England Association of Schools and Colleges was created to ensure secondary school students were ready for college(Brittingham, 2009). Accreditation has since evolved to a voluntary, self-regulatory, and non-governmental quality assurance process, but also to playing a gatekeeping role for federal funds.Accreditors are approved by the USDOE and CHEA and funded through member dues and fees. Despite progress in helping colleges and universities improve, accreditation has been criticized for a number of reasons, including not fostering innovation, not allowing easy comparisons between institutions, and not doing enough for institutions to be more accountable for their outcomes(Commission on the Future of Higher Education, 2006).

Postsecondary institutions' failure in demonstrating evidence based decision making is part of the reason they were ushered into the institutional effectiveness era (Head & Johnson, 2011; McLeod & Atwell, 1992; Todd & Baker III, 1998). Unfortunately, higher education has also been challenged with institutional effectiveness, which is the basis for most accreditation sanctions in the SACSCOC region (Head & Johnson, 2011; Sullivan & Wilds, 2001)as well as a catalyst for the present study.In the next chapter, methods proposed for exploring potential patterns between the study's variables will be described.

Chapter Three: Methodology

Since the mid-twentieth century, accreditation in the U.S. has been a voluntary and non-governmental system of peer evaluation with the ultimate aim to ensure educational control. Despite the fact that education has generally been considered the jurisdiction of the states, the federal government has used its funding capacity as a means to influence all levels of education. Since 1965, the federal government has used the reauthorization of the Higher Education Act, which occurs every six years, as an opportunity to lead debates on addressing current higher education issues (Lingenfelter & Lenth, 2005). Starting in the early 1980s, U.S. academics, business, and government leaders started to collaborate in an effort to help stop the declining quality and competitiveness of U.S. goods and services in the global economy. Higher education became a focal point, because postsecondary education quality plays an important role in a country's international competitiveness (Liu, 2011b).

The collaborative work of academe, business, and government led to the concept of continuous improvement in the late 1980s, which was quickly embraced by two regional accreditors, the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and the North Central Association of Colleges and Schools Higher Learning Commission (HLC). SACSCOC's quality enhancement plan (QEP) encouraged member institutions to engage in continuous improvement activities. Around the same time, SACSCOC also introduced the institutional effectiveness (IE) concept to its membership. Institutional effectiveness was basically the process of participating in

assessment activities aimed at demonstrating that a college or university was fulfilling its mission and improving. Over 20 years after IE was made an accreditation requirement, higher education institutions still struggle, andIE requirements are the cause for most SACSCOC school sanctions (Head & Johnson, 2011; Sullivan & Wilds, 2001). As a result of that struggle, the public still depends on measures such as retention, transfer, and graduation rates, student-to-faculty ratios, and expenses per full-time equivalent (FTE), et ceteraas indicators of quality (Cameron, 1986; Volkwein, 2010; Welker & Morgan, 1991). This study was an attempt to understand why colleges and universities are most challenged by IE requirements.

Research Questions

The purpose of this study was to examine the relationships between SACSCOC accreditation status based on institutional effectiveness requirements and some of the student and institutional measures on which the public has depended, when judging the quality of a college or university. Specifically, of all SACSCOC baccalaureate member institutions that were reviewedbetween 2008 and 2012,

- What is the relationship, if any, between their accreditation status based on IE requirements and the most common student variables (selectivity, student-to-faculty ratio, retention rate, and graduation rate)?
- What is the relationship, if any, between their accreditation status based on IE requirements and nine common institutional variables(instruction expenses per FTE, academic support expenses per FTE, institutional supportexpenses per FTE, student service expenses per FTE, IT expenses per FTE, percent students

receiving state/local/institutional grant aid, percent students receiving federal loans, institutional level, and institutional type)?

- What patterns, if any, emerge that may inform institutional knowledge about the relationship, if any, between accreditation status based on IE requirements and some of the common student or/and institutional measures mentioned above?

Method

Studies show that calls for higher education to be more accountable have been increasingly louder (Astin & Antonio, 2012; Eaton, 2007; Ewell, 2011b; Head, 2011; Lingenfelter & Lenth, 2005; Welsh & Metcalf, 2003a; Vaughn, 2002). This is reflected by the number of high-level commissions that have been created in the past 30 years under the sponsorship of the U.S. Department of Education (USDOE) to examine the state of higher education. One way for accrediting agencies to address those concerns has been to require colleges and universities to engage in assessment activities for the purpose of demonstrating institutional effectiveness. However, as mentioned above, SACSCOC institutions have been challenged by the institutional effectiveness requirements. This quantitative study attempts to shed some light on SACSCOC IE processes by exploring the potential connections between accreditation status based on IE requirements and some common student and institutional variables.

Participants

The population for this study is all colleges and universities accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). The reason for that interest is twofold: (a) SACSCOC is considered a pioneer in requiring institutional effectiveness for higher education accreditation (Head, 2011) and (b)

institutional effectiveness is the requirement for which most SACSCOC institutions have been sanctioned(Head & Johnson, 2011; Sullivan & Wilds, 2001). SACSCOC currently accredits 804 colleges and universities, 798 of which are from one of 11 U.S. southern states and 6 from outside the continental U.S.A December 2013 *Member, Candidate and Applicant List* document breaks SACSCOC membership down into several categories, including by state, by level, and by institutional type (SACSCOC, 2014c). Institutional level refers to the highest degree offered at a college or university: level I for Associate, level II for Baccalaureate, level III for Master, level IV for Educational Specialist, level V for three or fewer Doctorate degrees, and level VI for four or more Doctorate degrees. SACSCOC is the accreditor for 275 level I, 121 level II, 141 level III, 23 level IV, 140 level V, and 104 level VI institutions. As far as institutional types within SACSCOC membership, the above source lists 481 public institutions, 308 private not-for-profit, and 15 private for-profit colleges and universities. In terms of breakdown by state, the same source lists 53 institutions in Alabama, 77 in Florida, 86 in Georgia, 51 in Kentucky, 38 in Louisiana, 32 in Mississippi, 112 in North Carolina, 50 in South Carolina, 64 in Tennessee, 163 in Texas, 72 in Virginia, and 6 outside of the United States. SACSCOC members from outside of the U.S. include one in Dubai and five in Mexico. A purposeful sampling procedure was used in this study to select SACSCOC institutions accredited between 2008 and 2012. The main reason for that sampling choice was that some archival data elements needed for such a study are often either unavailable or inaccurate at some points in time; participating institutions are often allowed to make any necessary corrections they wish. All institutions that offered baccalaureate degrees and

were engaged in either the SACSCOC initial accreditation or reaffirmation process between 2008 and 2012(n = 269) comprised the sample for this study.

Instrumentation

Due to the historical and quantitative nature of the study, much of the data came from archival sources which gather data through surveys. Some datacame from a federal data source known as the Integrated Postsecondary Education Data System (IPEDS). EDUCAUSE, which is an organization that promotes IT best practices in higher education, was contacted for data about information technology (IT)expenses per FTE. Table 3.1 below provides details on the source of each of the variables used in the study.

IPEDS is a collection of interrelated surveys conducted annually by the National Center for Education Statistics (NCES) to collect information from all colleges, universities, and technical and vocational schools that are involved in the federal student financial aid programs. Based on the Higher Education Act of 1965, such institutions are required to report various categories of data including data on enrollments, program completions, graduation rates, faculty and staff, and finances, because stakeholders depend on these data for basic information on higher education institutions (IPEDS, 2013a). Based on a 2002-03 data quality study, it was determined that IPEDS data were reliable and valid (IPEDS, 2013b). As the study reported, the reliability and validity of the data were justified by the low number of institutions that made changes to their original submissions, and also by the fact that the size of the changes made did not have a significant effect on the original data.

EDUCAUSE is a nonprofit organization whose goal is to help higher education IT leaders with their strategic decisions (EDUCAUSE, 2013). With 1800 college and

university members, EDUCAUSE provides benchmarking data as well as emerging information technology trends and developments necessary for IT strategic planning and management. EDUCAUSE's Core Data Service survey requires member institutions to provide data about IT services, including IT expenditure data.

Data Sources

While most of the data used for the study came from an archival source such as IPEDS as indicated above, SACSCOC provided information about accreditation status based on institutional effectiveness for institutions it reviewed between 2008 and 2012. All data points were based around the year the associated SACSCOC member institution was reviewed. For example, retention and graduation rates for a college or university that was reviewed by SACSCOC in 2010 were either 2009-2010 or 2010-2011 retention and graduation rates. All the study'sdirect variables and the sources for the associated data are summarized in Table 3.1 below. The study was approved by The College of William and Mary'sSchool of Education Institutional Review Committee (EDIRC)and data were requested from EDUCAUSE,SACSCOC, and IPEDS. The combination of the above purposeful sampling and data gathering strategy was used to help address the research questions posed in this study.

Table 3.1
Variables and Data Sources

Variable	Source
Selectivity	IPEDS
Student-to-faculty ratio	IPEDS
Retention rate	IPEDS
Graduation rate	IPEDS
Instruction expenses per FTE	IPEDS
Academic support expenses per FTE	IPEDS
Institutional supportexpenses per FTE	IPEDS
Student service expenses per FTE	IPEDS
Percent students receiving state/local/institutional grant aid	IPEDS
Percent students receiving federal loans	IPEDS
IT expenses per FTE	EDUCAUSE
Institutional level	SACSCOC
Institutional type	SACSCOC
Accreditation status based on IE requirements*	SACSCOC

Note. *Accreditation status based on IE requirements was data about any SACSCOC action related to compliance, warning, or probation with respect to Core Requirements 2.5 and 2.12 as well as Comprehensive Standards 3.3.1 and 3.3.2.

Data Analysis

In order to provide a better understanding of the potential relationships between accreditation status based on SACSCOC's institutional effectiveness requirements and some common student and institutional measures, a correlational research design was used to explore multivariate associations between the different sets of variables involved

in the research questions for the study. In terms of how the combined EHE/I-E-O framework was applied to the study, selectivity and student-to-faculty ratio were input variables as theyare both related to students, who are beneficiaries and constituents. Although student-to-faculty ratio can also be classified as an environmental variable, the fact that this variable is a significant function of the number of students who choose to enroll at a particular institution justifies its categorization as an input variable. This is supported by Astin and Antonio's (2012) argument that environmental experiences can often be adequately classified both as input as well as outcome variables.

Instruction expenses per FTE, academic support expenses per FTE, institutional supportexpenses per FTE, student service expenses per FTE, and IT expenses per FTE are per-student estimations of programs and services in the designated areas and are therefore environmental variables. Percent students receiving state/local/institutional grant aid, percent students receiving federal loans, institutional level, and institutional type are also environmental variables. Percent students receiving state/local/institutional grant aid is an environmental variable because availability of such aid can be considered a program or service resulting from the collaboration between leadership, constituents, as well as faculty and staff. Likewise, percent students receiving federal loans is contingent on eligibility for Title IV of the Higher Education Act, which also depends on the above mentioned collaboration.

Retention rate, graduation rate and SACSCOC accreditation status based on IE requirements make up the outcome variables for the study. As indicated in Chapter One (Figure 1.4), *Beneficiaries & Constituents* and *Assessment & Information Use* are the two categories of the EHE framework that can be classified under any of the three

components of I-E-O model. However, the former can clearly be associated with many of the study's variables whereas the latter may only be linked to *Accreditation status based on IE*. The rationale for linking *Assessment & Information Use*to *Accreditation status based on IE*is based on the fact that compliance with SACSCOC's IE requirements basically hinges on (a) whether member institutions identify expected outcomes, (b) assess how well they are meeting those outcomes, and (c) use assessment results to inform decision-making and improve. Illustration of the data analysis using the combined EHE/I-E-O model is provided in the below Figure 3.1. Data collected from the

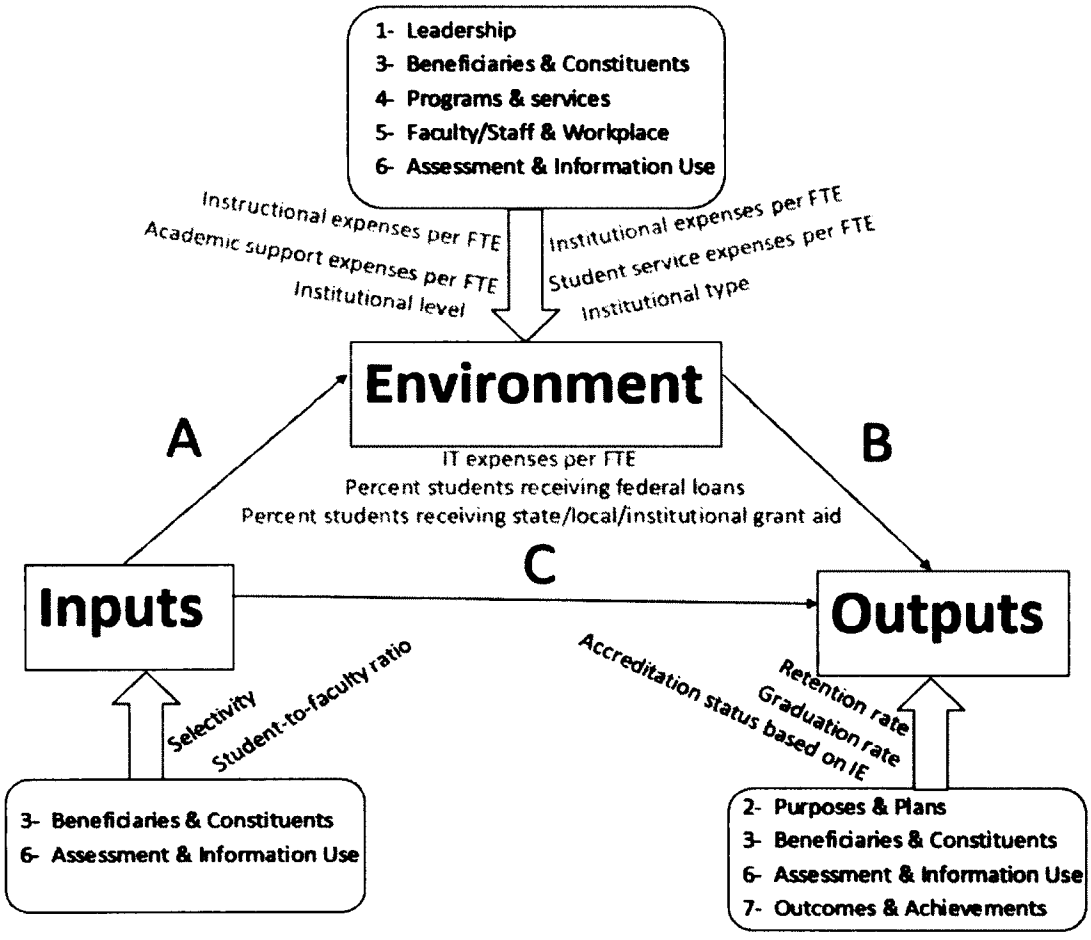

Figure 3.1. Data analysis through Combined EHE/I-E-O Model

various sources were input into a Microsoft Excel spreadsheet. They were then coded and analyzed according to the proposed design using the Statistical Package for the Social Sciences (SPSS), Version 22.

Statistical procedure. The first step in the analysis consisted of conducting a power test for sample adequacy as well as producing descriptive statistics for all variables in the study. Descriptive statistics included frequencies, means, and standard deviations. In the second step, chi-square analyses were run at an alpha level of .05 in an effort to identify if the categorical variables were truly independent or associated.The chi-square tests of independence or two-way chi square were appropriate in this instance because accreditation status based on institutional effectiveness requirements is categorized in two independent dimensions (Kiess & Green, 2010), due to its dichotomous nature of compliant or not compliant.

Following the chi-square tests, in the third step, binary logistic regression analyses were used. The logistic regression analyses examined the significance of potentialrelationships between accreditation status based on institutional effectiveness requirements – the dependent or outcome variable - and the student or institutional variables, which were the independent or predictor variables. While regression analysis is typically used to examine relationships between variables (Kiess & Green, 2010), logistic regression analysis techniques were more appropriate for this study because the criterion variable – accreditation status based institutional effectiveness requirements – was dichotomous (Wright, 1995). The results of the latter analyses were then used to answer the research questions posed in the study. An illustration of the analytical strategy detailing how each research question was addressed is included in Table 3.2.

Table 3.2
Analytical Strategy by Research Question

Research Question	Data Sources	Data Analysis
Of the baccalaureate schools that were reviewed by SACSCOC between 2008 and 2012, what is the relationship, if any, between their accreditation status based on IE and some of the most common student variables: selectivity, student-to-faculty ratio, retention rate and graduation rate?	SACSCOC IPEDS	Chi-Square tests Logistic regression analysis
Of the baccalaureate schools that were reviewed by SACSCOC between 2008 and 2012, what is the relationship, if any, between their accreditation status based on IE and nine common institutional variables:instruction expenses per FTE, academic support expenses per FTE, institutional supportexpenses per FTE, student service expenses per FTE, IT expenses per FTE, percent students receiving state/local/institutional grant aid, percent students receiving federal loans, institutional level, and institutional type?	SACSCOC IPEDS EDUCAUSE	Chi-Square tests Logistic regression analysis
Of the baccalaureate schools that were reviewed by SACSCOC between 2008 and 2012, what patterns, if any, emerge that may inform institutional knowledge about the relationship, if any, between their accreditation status based on IE and some of the common student or/andinstitutional measures mentioned above?	SACSCOC IPEDS EDUCAUSE	Chi-Square tests Logistic regression analysis

Ethical Considerations

Following guidelines from the College of William and Mary's EDIRC, all steps were taken to ensure the confidentiality and privacy of the data that were not publicly available. In order to ensure confidentiality and privacy of appropriate data, only non-identifiable or aggregated non-publically available information about participating institutions are included in the study report.

Assumptions, Delimitations, and Limitations

Assumptions

Several assumptions underlied the research methodology chosen for this study. First, the 2008-2012 timeframe was selected in an effort to guarantee availability of data for the variables of interest. Second, chi-square tests were thought to be reliable because the following assumptions would be met: (a) each institution reviewed between 2008 and 2012 would only contribute one value for each of the variables, whether it would be accreditation status based on institutional effectiveness or any other variable and (b) the expected frequencies for each variable would be higher than 5 (Kiess & Green, 2010). Expected frequencies are based on a minimum of 150SACSCOC baccalaureate institutions reviewed within the five-year span between 2008 and 2012.Third, as Licht (1995) pointed out, regression analysis can be used with categorical variables, in which case it is called logistic regression.

For this study, accreditation status based on SACSCOC'sinstitutional effectiveness requirementswas coded using numbers. For example, a compliant institution was assigned the code '1' while a non-compliant counterpart was given the code '0'. Five assumptions had to be met in order for the logistic regression model used

in this study to be effective (Wright, 1995). Accreditation status based on the institutional effectiveness requirement was dichotomous, since an institution could only be either compliant or non-compliant. The outcomes were expected to be independent, because no institution reviewed by SACSCOC could have more than one outcome at the same time. For the latter two reasons, accreditation status was mutually exclusive; but accreditation status was also mutually exhaustive, because each institution reviewed for compliance with any of the four institutional effectiveness requirements fell under one of the two statuses. Although Wright (1995) pointed out that the assumption about specificity is rarely met in practice, the model was expected to be specified correctly in this study due to the use of chi-square tests prior to logistic regression. O'Connell and Gray (2011) also asserted that sample size appropriateness for logistic regression was not straightforward. This was explained by the various sample size rules of thumb found in the literature ranging from a minimum of 10 cases per predictor variable to 50 cases per predictor variable (Aldrich & Nelson, 1984). The sample size for the present study fell somewhere within that range.

Limitations

One potential limitation for this study was the possibility that some information on important variables would be missing, incomplete, or compromised, as is typically the case with archival sources (Rudestam & Newton, 2007). Missing or incomplete data are often due to the lack of information on important variables that were supposed to be gathered during the original data collection. Compromised data are typically the result of relying on flawed data or obsolete measures. So, threats to internal validity in the form of compromised data were also a potential limitation of the study. Whenever there were

missing data issues for a given institution, consideration was given to either use an imputation strategy or remove the institution from the analysis. An additional threat to internal validity was the change in SACSCOC's Comprehensive Standard (CS) 3.3.1 between 2010 and 2012. In the 2010 Principles of Accreditation, CS 3.3.1.3 read "educational support services" whereas the same standard was revised to "academic and student support services" in 2012 (SACSCOC, 2014a, para. 2). Restricting the study to the SACSCOC region might have been another limitation of the study; it was a threat to external validity since findings could not be generalized beyond the SACSCOC region. Institutions from Dubai and Mexico were not included in the study, because unlike their U.S. based counterparts, they were not required to provide data to IPEDS, which was the source of most data included in the study. Due to the complex nature of higher education, another limitation of this study was the impossibility to control for all extraneous variables that impacted accreditation status based on institutional effectiveness. An additional potential limitation of the study might have been the low power resulting from a small overall sample size. Data analysis might have shown no relationships among the variables, thereby lessening the significance of the study. Regardless of the possibility of the latter two limitations occur, the study would have still been useful in the sense that it would have informed decisions about further studies about accreditation status related to institutional effectiveness.

Delimitations

In terms of delimitations, restricting the timeframe to the period between 2008 and 2012 narrowed the scope of the study. It would have been ideal to choose a 10-year interval, because it would have included the entire population of

SACSCOC'sbaccalaureate degree granting membership (n = 491) and consequently yielded more powerful statistical results. However, expanding the timeframe would have potentially affected the quality of the data. The rationale for this is twofold. First, as indicated above, the only available data quality study conducted by the NCES dated back to 2002-2003. Although the 2002-2003 study showed that IPEDS data were reliable, it is fair to assume that post 2002-2003 data collections were better as they would have leveraged recommendations from the above mentioned study. The second rationale for the selected timeframe is the fact that IPEDS data for the study's variables are only available for certain years. For example, student-to-faculty data are only available for academic years ranging from 2008-2009 through 2012-2013. Using a different timeframe may have resulted in too many institutions being replaced or removed from the study. Table 3.3 illustrates the years during which IPEDS variables used in the present study were available. The five-year range chosen for the study still provided a large enough sample - 269SACSCOC baccalaureate colleges and universities – for appropriate statistical analyses. Restricting the study to the SACSCOC region was also a delimitation, as it too narrowed the scope of the study.

Table 3.3
IPEDS Variables Availability Timeframe

Variable	IPEDS Name	Availability Timeframe
Selectivity	Percent admitted -total	2006-2013
Student-to-faculty ratio	Student-to-faculty ratio	2008-2012
Retention rate	Full-time retention rate	2003-2012
Graduation rate	Graduation rate, total cohort	2004-2012
Instruction expenses per FTE	Instruction expenses per FTE *	2005-2012
Academic support expenses per FTE	Academic support expenses per FTE*	2005-2012
Institutional support expenses per FTE	Institutional support expenses per FTE*	2005-2012
Student service expenses per FTE	Student service expenses per FTE*	2005-2012
Percent students receiving state/local/institutional grant aid	Percentage receiving state/local grant aid & Percentage receiving institutional grant aid	1998-2012
Percent students receiving federal loans	Percentage receiving federal loan aid	1998-2012

Notes. Source: National Center for Educational Statistics (2014a)
* Expenses data are generally based on GASB standards for public institutions and FASB standards for private institutions.

Description of Variables

This section provides a description of the variables used in this study, some of whichwere derived from calculations that involved variables not directly relevant to the study. Though institutional selectivity is often based on a threshold SAT/ACT score for

entering freshmen (Kuh & Pascarella, 2004; Pascarella et al., 2006), for the purpose of this study, selectivity for a given institution wasdefined as percent admitted, with a lower percent representing higher selectivity. This is, because while the SAT/ACT score criterion applies to prestigious institutions, which admit a low percentage of their applicants (Stearns et al., 2010), it may not apply to SACSCOC institutions that have open admission policies. Colleges and universities with open admission policies often admit all of their applicants and do not require SAT/ACT scores. Student-to-faculty ratio was also another derived variable as it was obtained by dividing the number of enrolled students by the number of instructional staff. The full-time retention rate represented the percentage of the previous year fall cohort that re-enrolledat the same institution the year of itsSACSCOC review. The graduation rate was the number of students who completed successfully within 150% of the normal time divided by the cohort size. For baccalaureate institutions, this would be the number of students who graduated within six years. It should be noted that IPEDS only collects the graduation rate for first-time full-time students in each cohort.

As far as the expense variables were concerned, the study used the new Governmental Accounting Standards Board (GASB) format and the Financial Accounting Standards Board (FASB) format, which arethe accounting standards generally used by public and private institutions, respectively (National Center for Education Statistics, 2014c). The National Center for Education Statistics (2014a) described the various expense variables used in the study as follows:

> **Instruction expenses:**A functional expense category that includes expenses of the colleges, schools, departments, and other instructional divisions of the

institution and expenses for departmental research and public service that are not separately budgeted. Includes general academic instruction, occupational and vocational instruction, community education, preparatory and adult basic education, and regular, special, and extension sessions. Also includes expenses for both credit and non-credit activities. Excludes expenses for academic administration where the primary function is administration (e.g., academic deans). Information technology expenses related to instructional activities if the institution separately budgets and expenses information technology resources are included (otherwise these expenses are included in academic support).

Academic support expenses: A functional expense category that includes expenses of activities and services that support the institution's primary missions of instruction, research, and public service. It includes the retention, preservation, and display of educational materials (for example, libraries, museums, and galleries); organized activities that provide support services to the academic functions of the institution (such as a demonstration school associated with a college of education or veterinary and dental clinics if their primary purpose is to support the instructional program); media such as audiovisual services; academic administration (including academic deans but not department chairpersons); and formally organized and separately budgeted academic personnel development and course and curriculum development expenses. Also included are information technology expenses related to academic support activities; if an institution does not separately budget and expense information technology resources, the costs

associated with the three primary programs will be applied to this function and the remainder to institutional support.

Institutional support expenses: A functional expense category that includes expenses for the day-to-day operational support of the institution. Includes expenses for general administrative services, central executive-level activities concerned with management and long range planning, legal and fiscal operations, space management, employee personnel and records, logistical services such as purchasing and printing, and public relations and development. Also includes information technology expenses related to institutional support activities. If an institution does not separately budget and expense information technology resources, the costs associated with student services and operation and maintenance of plant will also be applied to this function.

Student service expenses: A functional expense category that includes expenses for admissions, registrar activities, and activities whose primary purpose is to contribute to students emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instructional program. Examples include student activities, cultural events, student newspapers, intramural athletics, student organizations, supplemental instruction outside the normal administration, and student records. Intercollegiate athletics and student health services may also be included except when operated as self - supporting auxiliary enterprises. Also may include information technology expenses related to student service activities if the institution separately budgets and expenses information technology resources(otherwise these expenses are

included in institutional support) (definitions directly quoted from NCES' IPEDS database).

For each expense category in this study, the expenses per FTE is those specific expenses divided by the FTE enrollment as reported in the fall of the review year. As defined in Chapter One, student FTE is the sum of full-time student enrollment and the full-time equivalent part-time student enrollment (The National Center for Education Statistics, 2014b). For example, the instruction expenses per FTE for an institution reviewed by SACSCOC in 2008 was computed as the total instruction expenses divided by the fall FTE enrollment for the 2008 academic year. Although all of the above expenses may include some IT expenses, a separate IT expenses per FTE would have been calculated as the total IT expenses reported to EDUCAUSE divided by the fall FTE enrollment. The percent of students receiving state/local/institutional grant aid represented the higher percentage between the percentageof full-time first-time undergraduate students receiving state/local grant aid and the percentageof full-time first-time undergraduate students receiving institutional grant aid. The percent of students receiving federal loans was the percentage of full-time, first-time undergraduate students who received Federal loans during the SACSCOC review year. As described in the above Participants section, while institutional level refers to the highest degree offered at an institution, institutional type denotes whether a college or university is public, private not-for-profit, or private for-profit.The last variable is accreditation status based on IE requirements, which is the decision made by SACSCOC's Commission on Colleges as to whether a member institution under review is compliant or not with principles reflected in CR 2.5,CR 2.12,

CS 3.3.1, and CS 3.3.2 (SACSCOC, 2014b). All of the variables involved in the present study as well as their source and formula are depicted in Table 3.4.

Table 3.4
Description of Variables

Variable	Source	Formula
Review Year	IPEDS, EDUCAUSE, SACSCOC	None
Institution	IPEDS, EDUCAUSE, SACSCOC	None
Selectivity*	IPEDS	Number of admissions divided by number of applicants
Student-to-faculty ratio*	IPEDS	Number of enrolled students divided by number of instructional faculty
First-time Full-time Retention rate*	IPEDS	Previous year first-time full-time fall cohort size divided by current year first-time full-time re-enrollment
Graduation rate*	IPEDS	Total number of first-time full-time completers within 150% or normal time divided by first-time full-time cohort size
Instruction expenses per FTE	IPEDS	Total instruction expenses divided by review year fall FTE enrollment
Academic support expenses per FTE	IPEDS	Total academic support expenses divided by review year fall FTE enrollment
Institutional support expenses per FTE	IPEDS	Total instructional support expenses divided by review year fall FTE enrollment
Student service expenses per FTE	IPEDS	Total student service expenses divided by review year fall FTE enrollment
Percent students receiving state/local/institutional grant aid	IPEDS	Higher of percent full-time first-time undergraduate students receiving state/local grant aid and percent full-

Variable	Source	Formula
		time first-time undergraduate students receiving institutional grant aid
Percent students receiving federal loans	IPEDS	None
IT expenses per FTE	EDUCAUSE	Total IT expenses divided by review year fall FTE enrollment
Institutional level	SACSCOC	
Institutional type	SACSCOC	
Accreditation status based on IE requirements**	SACSCOC	None

Note. *All ratios are converted to percentages and rounded to the nearest whole number.
** Accreditation status based on IE requirements were data about any SACSCOC action related to compliance, warning, or probation with respect to Core Requirements 2.5 and 2.12 as well as Comprehensive Standards 3.3.1 and 3.3.2.

Summary

The purpose of this quantitative study was to investigate potential relationships between SACSCOC accreditation based on IE requirements and some common student and institutional variables. This was accomplished through a correlational research design involving a purposeful sampling strategy that consisted of all baccalaureate degree granting colleges and universities reviewed by SACSCOC between 2008 and 2012. A three-step statistical procedure was used to explore possible relationships between the variableswhose data were expected tocome from one of three sources: IPEDS, EDUCAUSE, or SACSCOC. The results of the analysis were then used to help answer the three research questions posed in this study.

Chapter Four: Data Analysis and Results

The first three chapters set the stage for the importance of exploring potential relationships between accreditation actions related to SACSCOC's institutional effectiveness (IE) requirements and some common student and institutional variables. The current chapter describes the data gathering process, and also details the statistical procedures before presenting initial findings from statistical analysis. Together, these steps will help answer the research questions posed in the study.

Data Gathering

As indicated in Chapter Three, SACSCOC, IPEDS, and EDUCAUSE were the sources of the data used in the study. Upon approval from the College of William and Mary's School of Education Institutional Review Committee (EDIRC), an email request to SACSCOC yielded 10 documents containing relevant accreditation actions taken by SACSCOC between 2008 and 2012. Although Appendix A shows aggregate accreditation details for each of the five years, for every one of those five years there was a document for actions taken in June and another for December. From each of the SACSCOC documents, only the following data elements were extracted: the review year; institution name and state; whether the institution was accredited, reaffirmed, or sanctioned (warned or put on probation) for not complying with any of the four IE requirements; institution level; and institution type. SACSCOC referred to negative action when it warned, put on probation, or removed a college or

university from membership. As defined in Chapter Three, institution level refers to the highest degree offered by a college or university such as level II for Baccalaureate and level VI for four or more Doctorate degrees. Institution type was defined in Chapter One as whether an institution was public, private not-for-profit, or private for-profit.

The data collected from SACSCOC were the foundation of the study as they included the dependent variable in the form of actions taken by SACSCOC with respect to a given institution's compliance with any of the four IE requirements. As the data source for 10 of the study's 14 variables, IPEDS was the next most important data contributor. Unlike SACSCOC's data, IPEDS data were publically available. It should be noted that SACSCOC publically discloses all accreditation actions it has taken within that past year. The IPEDS Data Center was queried for data pertaining to SACSCOC institutions reviewed in each of the five years of interest. Considering that there are distinct accounting standards for financial data for private institutions and their public counterparts, both Financial Accounting Standards Board (FASB) and Governmental Accounting Standards Board (GASB) data were pulled at once and merged for each category of core expenses. Finally, the two datasets were combined into one made up of all SACSCOC institutions reviewed in the selected year. As expected, a few institutions were missing some data elements. For example, there were no selectivity data for Chipola College, Saint Catharine College, The University of Texas at Brownsville, and four other institutions reviewed in 2008. The method for addressing the missing data was to impute by computing the simple data average on the same variable for the remaining four years either before or after the year during which the data were missing, as long as the remaining years were between 2008 and 2012. Although this technique worked for

some variables, it did not for others as the data continued to be missing for previous and following years. Data for the related institutions were simply removed when the above imputation technique did not work. Appendix B includes a list of institutions and the actions that were taken to deal with missing data from those institutions. Additional details about the number of institutions lost can be found in the *Descriptive Statistics* section below.

Extracting IPEDS data for institutions reviewed in 2010 exposed that core expenses per FTE in IPEDS were actually only available from 2007-2008 through 2011-2012 and not from 2005-2006 through 2011-2012 as suggested in Chapter Three. As a result, for purposes of consistency, the appropriate years for 2008 and 2009 core expenses were reconsidered. Thus, core expenses per FTE for 2008 were 2007-2008 data as opposed to 2008-2009 as the first time around. In an effort to be even more consistent, for institutions reviewed in 2008, 2007-2008 selectivity data, fall 2007 FTE enrollment and full-time retention rate data, and August 31, 2008 graduation rate data were extracted. However, because student-to-faculty ratio data were only available for the fall 2008 through fall 2012 terms, these termswere used instead. The below Table 4.1 illustrates the logic used to query various IPEDS data in each of the five years.

Data about IT expenditures would have come from EDUCAUSE. After many exchanges in an effort to (a) gain access to EDUCAUSE's core data and (b) understand the data which could be accessed, it became clear that the only reliable IT expenditure data that could be used in the study were for the 2012-2013 fiscal year. Even with these limitations, it was determined that rather than drop the variable from the study altogether,

it would be informative to keep it as described in the previous chapter.Indeed, the lack of data in this area was both a surprise and a finding in itself.

Table 4.1
IPEDS Variables – SACSCOC Review Year to IPEDS Data Availability Map

Variable	2008	2009	2010	2011	2012
Selectivity	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Student-to-faculty ratio	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
Retention rate	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011
Graduation rate	August 2008	August 2009	August 2010	August 2011	August 2012
Instruction expenses per FTE	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Academic support expenses per FTE	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Institutional support expenses per FTE	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Student service expenses per FTE	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Percent students receiving state/local/institutional grant aid	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Percent students receiving federal loans	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012

Note. The years in the header row represent the SACSCOC review years whereas the years, semesters, and dates in the table cells represent the timeframes for which associated variable data were pulled for each of the review years.

Combining IPEDS and SACSCOC data uncovered that a few institutions on the SACSCOC list were not on the IPEDS list. Lambuth University is one example of such institutions; further investigation revealed that Lambuth University had ceased to operate

as an independent institution when it merged with The University of Memphis. Together, 269 of the 278 baccalaureate institutions that were reviewed by SACSCOC between 2008 and 2009 remained in the initial data set for the study. Now that the data collection process has been explained in detail, the focus will shift to the statistical analysis of the variables described in Chapter Three.

Statistical Procedures

As indicated in the previous chapter, addressing sample adequacy through power analysis was the first statistical step. Power in the case of the present study would be the probability of detecting significant relationships when they truly exist (Keiss & Green, 2010; Weinfurt, 1995). The magnitude of such relationships is a function of the sample size used for the study. Considering that there is no agreed upon rule of thumb in the literature for the ideal sample size for logistic regression (O'Connell & Gray, 2011), at about 22 cases per predictor variable (269 institutions divided by 12 variables), the sample size for this study fell in the threshold range between 10 cases per predictor suggested by some and 50 cases per predictor recommended by others (Aldrich & Nelson, 1984). Therefore, the study had adequate but not excessive statistical power.

Descriptive Statistics

Some descriptive statistics were helpful in exploring potential relationships between accreditation status based on IE requirements and several institutional and student variables. Although the study focused on SACSCOC's IE requirements, as illustrated in Table 4.2 below, not all negative actions taken by SACSCOC between 2008 and 2012 were related to IE. During the five-year span of this study, SACSCOC took both IE-related and non-IE-related actions.

Table 4.2
Summary of SACSCOC Actions between 2008 and 2012

Year	Count of Compliant Institutions	Count of IE Sanctioned Institutions	Count of Non-IE Sanctioned Institutions	Count of Institutions Removed from SACSCOC Membership
2008	42	6	1	0
2009	43	4	0	1
2010	51	7	1	1
2011	55	6	0	1
2012	45	10	1	2
TOTAL	236	33	3	4

Note. Source: SACSCOC, 2014.

Institutions that fell in both categories were counted as IE-sanctioned institutions in Table 4.2. Those counted as non-IE sanctioned institutions were the subject of negative actions from SACSCOC unrelated to IE requirements, but also did not get reaffirmed between 2008 and 2012. Table 4.2 details overlaps between institutions that received IE-related sanctions from SACSCOC and those that were removed from SACSCOC membership during the above mentioned timeframe. The same table also shows that SACSCOC took IE-related negative actions against 12.3 percent (33/269) of institutions it reviewed between 2008 and 2012.

Table 4.3 provides a few descriptive statistics about IPEDS variables. It demonstrates that all 269 institutions in the study reported data about local, state, or institutional grant aid whereas 49 of them did not have any data on selectivity (Percent Admitted). Based on the same table, there was at least one institution where no students

were on federal loan aid. Another striking fact from Table 4.3 was the wide range for student-to-faculty ratio.

Table 4.3
Descriptive Statistics for IPEDS Variables

	N			Std.		
	Valid	Missing	Mean	Deviation	Min.	Max.
Graduation Rate	248	21	43	17	0	95
Percent Local/State/Institutional Grant Aid	269	0	65	31	0	100
Percent Federal Loan Aid	251	18	61	23	0	97
Instruction Expenses per FTE	258	11	10184	21188	2629	216337
Academic Expenses per FTE	258	11	2216	2835	191	34087
Student Service Expenses per FTE	258	11	2690	1776	244	9662
Institutional Support Expenses per FTE	258	11	4799	4473	311	37998
Percent Admitted	220	49	60	18	14	100
Full-Time Retention Rate	247	22	68	12	25	100
Student-To-Faculty Ratio	263	6	15	5	3	31

Table 4.4 illustrates the distribution of colleges and universities reviewed by SACSCOC between 2008 and 2012 across 11 Southern states. The last column in the table represents the percentage of the SACSCOC membership that offered Baccalaureate degrees in the 11 Southern states. This column shows that the sample is closely representative of the population. The largest number of institutions reviewed were from Texas (51/269, 19%), while Mississippi had the fewest at three percent (9/269).

Table 4.4
Institutions Count by State

State	Frequency	Sample Percent	Population Percent
AL	16	5.9	5.9
FL	38	14.1	14.5
GA	32	11.9	11.6
KY	15	5.6	6.3
LA	13	4.8	5.3
MS	9	3.3	3.3
NC	30	11.2	10.6
SC	21	7.8	6.5
TN	20	7.4	8.8
TX	51	19.0	18.5
VA	24	8.9	8.8
Total	269	100.0	100.1

Table 4.5
Institutions Count by Level

Level	Frequency	Sample Percent	Population Percent
II	71	26.4	24.8
III	89	33.1	26.9
IV	11	4.1	4.7
V	59	21.9	23.0
VI	39	14.5	20.6
Total	269	100.0	100.0

Table 4.6
Institutions Count by Type

Institutional Type	Frequency	Sample Percent	Population Percent
Private, For-Profit	7	2.6	2.2
Private, Not-for-Profit	163	60.6	55.2
Public	99	36.8	42.6
Total	269	100.0	100.0

Tables 4.5 and 4.6 provide two additional views for the study's data. Table 4.5 gives a breakdown of the 269 institutions by level. A distribution based on institution type is offered on Table 4.6.

Before moving on to the next data analysis step, it was necessary to remove cases of missing data that could not be imputed. Thus, institutions for which there were missing data were removed from the study. The University of Texas Health Science Center at San Antonio (UTHSCSA) was removed because IPEDS queries returned zero for its graduation rate as well as its financial aid data, and imputation was not successful for the latter type of data. An investigation showed that although UTHSCSA offered baccalaureate programs, it did not directly admit first-time full-time students. UTHSCSA encourages students interested in its undergraduate programs to take their first two years of general education at any other accredited institution. Following the removal of institutions with missing data elements, there was a total of 211 cases left for the study as illustrated in the below descriptive statistics table (Table 4.7).

The loss of data raised the question about the significance of the difference between the means in Table 4.3 and the ones in Table 4.7. Performing a paired sample t-test on the two sets of means revealed that the differences between the means in the two data sets were not significant ($p=0.246$). This showed that the loss of data did not create a bias in the sample for the 10 continuous variables. There were also some concerns about the impact of the lost data from categorical variables. A chi-square test of independence showed that the only significant impact due to the loss of data was related to the institutional type ($p=0.049$). Overall, it is fair to say that the loss of data had a

minimal to moderate impact because it only significantly changed the contribution of one of the twelve predictor variables.

Table 4.7
Descriptive Statistics for IPEDS Variables with No Missing Data

	N			Std.		
	Valid	Missing	Mean	Deviation	Min.	Max.
Graduation Rate	211	0	45	17	8	95
Percent Local/State/Institutional Grant Aid	211	0	74	25	7	100
Percent Federal Loan Aid	211	0	64	19	0	97
Instruction Expenses per FTE	211	0	7384	4239	2705	42271
Academic Expenses per FTE	211	0	1906	1386	191	8963
Student Service Expenses per FTE	211	0	2858	1817	244	9662
Institutional Support Expenses per FTE	211	0	4256	2938	1079	25451
Percent Admitted	211	0	61	18	16	100
Full-Time Retention Rate	211	0	69	12	25	96
Student-To-Faculty Ratio	211	0	15	4	7	31

Tables 4.8 through 4.12 also display some important descriptive statistics. Table 4.9 provides a count of institutions that were reviewed during each of the five years of interest for the study. Table 4.10 shows the distribution between compliant institutions and their non-compliant counterparts during the same timeframe. Table 4.11 illustrates the breakdown by institutional level between 2008 and 2012. Table 4.12 shows that the study did not include any of the seven Private, For-Profit institutions that were reviewed by SACSCOC between 2008 and 2012.

Table 4.8
Institutions Count by State with No Missing Data

State	Frequency	Sample Percent	Population Percent
AL	12	5.7	5.9
FL	24	11.4	14.5
GA	24	11.4	11.6
KY	13	6.2	6.3
LA	10	4.7	5.3
MS	8	3.8	3.3
NC	29	13.7	10.6
SC	19	9.0	6.5
TN	19	9.0	8.8
TX	30	14.2	18.5
VA	23	10.9	8.8
Total	211	100.0	100.1

Table 4.9
Institutions Count by Review Year with No Missing Data

Review Year	Frequency	Percent
2008	40	19.0
2009	38	18.0
2010	48	22.7
2011	46	21.8
2012	39	18.5
Total	211	100.0

Table 4.10
Institutions Count by SACSCOC Actions with No Missing Data

SACSCOC Action	Frequency	Percent
Non-Compliant	23	10.9
Compliant	188	89.1
Total	211	100.0

Table 4.11
Institutions Count by Level with No Missing Data

Level	Frequency	Sample Percent	Population Percent
II	44	20.9	24.8
III	78	37.0	26.9
IV	11	5.2	4.7
V	46	21.8	23.0
VI	32	15.2	20.6
Total	211	100.0	100.0

Table 4.12
Institutions Count by Type with No Missing Data

Type	Frequency	Sample Percent	Population Percent
Private, Not-for-Profit	142	67.3	55.2
Public	69	32.7	42.6
Total	211	100.0	97.8*

Note. *Private, For-Profit institutions are missing from the population percent (2.2%).

Chi-Square Tests

Chi-square tests were the next procedures that were run to verify that the two dimensions of IE-based accreditation status were truly independent. Chi-square ($\chi 2$) is based on the probability of a certain event occurring, such as receiving a negative action for not complying with any of SACSCOC's IE requirements. This probability is in turn a function of comparing observed frequencies (actual event occurrences) to expected or theoretical frequencies (Kiess & Green, 2010). The formula for chi-square is as follows:

$$\chi 2 = \sum(O_f - E_f)^2/E_f$$

Where:

$\chi 2$ is the chi-square value,

O_f represents observed frequency and,

E_f is the expected frequency.

The above formula suggests that the value of chi-square increases with the discrepancy between observed frequencies and expected frequencies. A p-value represents the percent chance that there is a difference between the two types of frequencies, in which case the null hypothesis would be true. In the case of the present study, p-values less than 0.05 were considered significant to confirm that the two dimensions of IE-based accreditation status were independent.

Chi-Square tests of independence. In order to determine if the two dimensions of IE-based accreditation status were truly independent, chi-square tests of independence were run at an alpha level of 0.05. The two categorical predictors in the study – institution level and institution type – were included in the tests. The null hypothesis for these tests was that none of the categorical predictors would have an effect on IE-based accreditation status. Stated differently, the null hypothesis was that SACSCOC IE-based accreditation status was independent of institution level and institution type. Tables 4.13 through 4.16 summarize the outcomes of the tests.

Though Table 4.14 indicates that the association between institution level and IE-based accreditation status is not significant (p=0.228), Table 4.16 shows a significant Pearson Chi-Square (p=0.033), which indicates that institution type is related to IE-based accreditation status. Therefore, the above null hypothesis was rejected.

Table 4.13.
*Crosstab - Institution Level * SACSCOC Action*

			SACSCOC Action		
			Non-Compliant	Compliant	Total
Institution Level	II	Count	8	36	44
		% of Total	3.8%	17.1%	20.9%
	III	Count	10	68	78
		% of Total	4.7%	32.2%	37.0%
	IV	Count	1	10	11
		% of Total	.5%	4.7%	5.2%
	V	Count	3	43	46
		% of Total	1.4%	20.4%	21.8%
	VI	Count	1	31	32
		% of Total	.5%	14.7%	15.2%
Total		Count	23	188	211
		% of Total	10.9%	89.1%	100.0%

Table 4.14.
*Chi-Square Tests of Independence: Institution Level * SACSCOC Action*

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.635	4	.228
Likelihood Ratio	6.101	4	.192
N of Valid Cases	211		

Table 4.15.
*Crosstab – Institution Type * SACSCOC Action Code*

			SACSCOC Action		
			Non-Compliant	Compliant	Total
Institution Type	Private, Not-for-Profit	Count	20	122	142
		% of Total	9.5%	57.8%	67.3%
	Public	Count	3	66	69
		% of Total	1.4%	31.3%	32.7%
Total		Count	23	188	211
		% of Total	10.9%	89.1%	100.0%

Table 4.16.
*Chi-Square Tests of Independence: Institution Type * SACSCOC Action*

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.533	1	.033		
Continuity Correction	3.586	1	.058		
Likelihood Ratio	5.224	1	.022		
Fisher's Exact Test				.035	.024
N of Valid Cases	211				

Binary Logistic Regression Analysis

As explained in Chapter Three, binary logistic regression is the appropriate test because the outcome (or dependent) variable was dichotomous. That is, IE-based accreditation status for a given institution could either be compliant (coded as 1) or non-compliant (coded as 0). The independent or predictor variables for the binary logistic regression were institution level, institution type, and all the 10 variables found on Table 4.7.

Unlike in linear regression where the goal is to predict a score on a continuous dependent measure, in binary logistic regression, the aim is to predict the probability of having one outcome or another (1=compliant or 0=non-compliant), based on a nonlinear

function of a linear combination of predictors (Wright, 1995). In the case of the present study, binary logistic regression was used to predict the probability that an institution will be compliant or non-compliant with SACSCOC's IE requirements based on a combination of the above independent variables. Binary logistic regression also provides 'b' coefficients that measure each independent variable's partial contribution to variations in the outcome or dependent variable. The aforementioned probability then helps determine the odds of membership in a target category by dividing the probability of membership in the target category by the probability of membership in the other category. Odds let one know how much more likely it is that an observation will belong to a target category instead of another category. The ultimate goal of binary logistic regression is to obtain the odds ratio, which estimates the change in the odds of membership in the target category for every unit increase in a predictor (Wright, 1995). In the event the predictor is a categorical variable, the odds ratio indicates the odds that a reference category will produce a particular outcome rather than the other categories. The binary logistic regression equation is as follows:

$$p = e^{(A+B_1X_1+B_2X_2+B_3X_3\ldots)}/1 + e^{(A+B_1X_1+B_2X_2+B_3X_3\ldots)}$$

Where:

p = the probability that a case is in one of the two outcome categories,

e = the exponential function (approximately 2.72),

A = the constant of the equation and,

B_i = the coefficient associated with a given predictor variable.

From the above formula, e represents the exponential function, which is a constant with an estimated value of 2.72. Thus, taking an exponential function of a number is the equivalent of raising 2.72 to the power of that number. For example, $e^2 = (2.72)^2 = 7.40$.

Interpretation of binary logistic regression results. Since this is an exploratory study, the recommended logistic regression method is Forward Stepwise, because it automatically determines which variables to add to or remove from the model. The Enter method is recommended when there is an existing theory suggesting predictor variables. Forward Stepwise using Wald was the Binary Logistic Regression method run for this step of the statistical procedures. The first two tables below (Table 4.18 and Table 4.19) represent the base model, which is the results of binary logistic regression with only the constant included before any coefficients (i.e. those related to the predictor variables used) are entered into the equation. Binary logistic regression compares this model with a model that includes all predictors to determine whether the latter model is more appropriate.

Table 4.17 suggests that if nothing was known about the predictor variables,

Table 4.17.
Step 0 - Classification Table

			Predicted		
			SACSCOC Action Code		
Observed			Non-Compliant	Compliant	Percentage Correct
Step 0	SACSCOC Action	Non-Compliant	0	23	0.0
		Compliant	0	188	100.0
	Overall Percentage				89.1

predicting that an institution would not be compliant with SACSCOC's IE requirements would be accurate 89.1% of the time. Table 4.18 shows the significant contribution (p=0.000) of the constant to the base model. Whether predictor variables actually contributed to the prediction was determined through the interpretation of the next few tables.

Table 4.18.
Step 0 – Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	2.101	.221	90.455	1	.000	8.174

Table 4.19 shows that the predictive power of the model slightly improved by 1.4% (90.5%) when independent variables were included. In a perfect model, all cases in each step would be on the diagonal and the overall percent correct would be 100%. In Step 2 for the present study, 13% of non-compliant institutions were correctly classified while 100% of compliant institutions were. Overall, 90.5 % of the institutions were correctly classified.

Table 4.19.
Steps 1 and 2 - Classification Table

			Predicted		
			SACSCOC Action		
Observed			Non-Compliant	Compliant	Percentage Correct
Step 1	SACSCOC Action	Non-Compliant	1	22	4.3
		Compliant	0	188	100.0
	Overall Percentage				89.6
Step 2	SACSCOC Action	Non-Compliant	3	20	13.0
		Compliant	0	188	100.0
	Overall Percentage				90.5

The Hosmer and Lemeshow goodness-of-fit statistic indicates the overall significance of the model. It does this by subdividing institutions into 10 ordered groups and comparing the number actually in each group (observed) to the number predicted by the logistic regression model (expected). The 10 ordered groups are created according to their estimated probability from 0.1 to 1.0. Well-fitting models show non-significance on the Hosmer and Lemeshow goodness-of-fit test, indicating that the predicted model does not significantly differ from the observed one. Table 4.20 shows that the model did fit the data in this case as the significance was greater than 0.05 on both steps; 0.592 and 0.137, respectively.

Table 4.20.
Steps 1 and 2 – Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6.498	8	.592
2	12.331	8	.137

Table 4.21.

Steps 1 and 2 – Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	Full-Time Retention Rate	.061	.019	10.442	1	.001	1.063
	Constant	-1.939	1.218	2.534	1	.111	.144
Step 2	Student Service Expenses per FTE	.000	.000	7.226	1	.007	1.000
	Full-Time Retention Rate	.061	.019	10.121	1	.001	1.063
	Constant	-.903	1.263	.511	1	.475	.405

Table 4.21 shows the predictors that made significant contributions to the model based on the Wald statistic. Specifically, student service expenses per FTE (p=0.007)and full-time retention rate (p=0.001) contributed significantly to the prediction. The Exp(B) column of the table presents the extent to which raising the corresponding predictor by one unit impacts the odds ratio. In this case, the small contribution of the two predictors was confirmed. That is, because institutions were only one time more likely to belong to the compliant group if student service expenses per FTE was raised by one dollar or if full-time retention rate was increased by one percent. With both coefficients nearing zero, the predicted odds of belonging to the compliant group was the same regardless of the value of student service expenses per FTE or full-time retention rate.

Table 4.22 provides some approximations of the coefficient of determination R^2, which estimates how well the model fits the data. Reporting from Step 2, the Nagelkerke R Square was the higher of the two R-squared estimates and showed 0.163. It confirmed the weak relationship between the two significant predictors and the outcome variable as it showed that only 16.3% of the variation in SACSCOC IE-based accreditation status was explained by the binary logistic model.

Table 4.22.
Steps 1 and 2 – Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	134.371	.051	.102
2	127.477	.081	.163

As indicated earlier, the 'B' values in Table 4.21 are the logistic coefficients and can be used to create a predictive equation. For this study, the equation was as follows:

$$p = e^{\{-0.903+(0.000 \times SSE) + (0.061 \times FTR)\}} / 1+e^{\{-0.903+(0.000 \times SSE) + (0.061 \times FTR)\}}$$

Where:

p = probability of a case,

SSE = Student Service Expenses per FTE and,

FTR = Full-Time Retention Rate

Both the constant and student service expenses per FTE could have been left out of the equation. This is due to the fact that Step 2 of Table 4.21 showed a non-significant constant (p=0.475) while the 'B' coefficient associated with student service expenses per FTE was 0.000.

In summary, a binary logistic analysis was conducted to predict IE-based accreditation status for SACSCOC members using all the independent variables as predictors. A test of the full model against a constant only model was statistically significant, indicating that two predictors (student service expenses per FTE and full-time retention rate) reliably distinguished between compliant and non-compliant institutions for SACSCOC's IE requirements. The overall prediction success was 90.5% (13% for non-compliant institutions and 100% for their compliant counterparts). The Wald statistic demonstrated that only student service expenses per FTE and full-time retention rate made significant contributions to prediction (p=0.007 and p=0.001, respectively). Exp(B) values indicated that institutions were only one time more likely to belong to the compliant group if student service expenses per FTE was raised by one dollar or if full-time retention rate was increased by one percent. As a result, though weak, there is a relationship between accreditation status based on SACSCOC's IE requirements and two student and institutional variables: full-time retention rate and student service expenses

per FTE. In the next chapter, these findings as well as recommendations and implications for practice and research will be discussed.

Chapter Five: Conclusions, Recommendations, and Implications

Pressure from various higher education stakeholders in the past thirty years have led accrediting processes to shift from weighing heavily on inputs and resources toward using assessable outcomes to gauge institutional effectiveness (Head, 2011; Moore, 1986; Volkwein, 2010a). Institutional effectiveness is generally considered to be the process of (a) defining expected outcomes, (b) assessing the extent to which actual outcomes match expected outcomes, and (c) using assessment findings to inform decision-making and improve ((Head & Johnson, 2011; Sullivan & Wilds, 2001; Welsh & Metcalf, 2003). In recent years, institutional effectiveness has been the requirement for which most colleges and universities have received accreditation sanctions in the SACSCOC region (Head & Johnson, 2011; Sullivan & Wilds, 2001). This shows that higher education, at least in the SACSCOC region, has had some challenges when demonstrating institutional effectiveness.

As a result of such challenges, which are increasingly being experienced by colleges and universities under other regional accreditors, the public has continued to rely on readily available metrics such as retention and graduation rates, student-to-faculty ratio, financial aid, expenses per full-time equivalent, et cetera, as indicators of quality (Cameron, 1986; Volkwein, 2010b; Welker & Morgan, 1991). This study sought to add to the scant literature about accreditation and institutional effectiveness by investigating potential relationships between SACSCOC accreditation status based on institutional

effectiveness requirements and some common student and institutional variables that students and their families have relied upon when selecting a college or university.

The sample for the study consisted of baccalaureate degree offering institutions that were reviewed by SACSCOC between 2008 and 2012. Binary logistic regression was used to examine if any of the independent variables listed on Table 3.1 could predict compliance with SACSCOC's institutional effectiveness requirements (the outcome variable). The following sections discuss interpretations and recommendations based on the findings of the study, as well as implications for practice and future research.

Interpretation of Findings with Respect to Research Questions

Statistical procedures described in Chapter Three and executed in Chapter Four informed response decisions related to the research questions posed in this study. Those decisions were a function of the significance of the above-mentioned statistical procedures.

Research Question One Decision

Of all SACSCOC baccalaureate member institutions that were reviewed between 2008 and 2012, what is the relationship, if any, between their accreditation status based on IE requirements and the most common student variables (selectivity, student-to-faculty ratio, retention rate, and graduation rate)?

Binary logistic regression showed that full-time retention rate, though a weak predictor, was the only student variable considered in this study that was related to SACSCOC IE-based accreditation status. This was not surprising because postsecondary institutions must first retain their students in school in order for them to achieve the expected learning outcomes. Talbert (2012) went as far as to posit that retention must be

a key student outcome for a higher education that wants to compete in the global economy. This is in line with the Combined EHE/I-E-O model discussed in Chapter One in the sense that, input from students (Beneficiaries & Constituents) combined with the educational environment in the form of programs and services will lead to positive retention outcomes. This could only be established reliably through a culture of IE, which is illustrated by Category 6 of the EHE framework. That is, because programs and services quality would be improved through ongoing assessment and information use, which in turn would increase student satisfaction and consequently student retention. Although this finding related to the first research question appeared to be in line with Kuh and Pascarella's (2004) conclusion that selectivity had a low impact on undergraduate achievement, it did not explain the public's continued reliance on the other student variables as indicators of quality. The finding suggests that more research is needed in order to determine the potential impact of the above-mentioned student variables on SACSCOC IE-based accreditation status.

Research Question Two Decision

Of all SACSCOC baccalaureate member institutions that were reviewed between 2008 and 2012, what is the relationship, if any, between their accreditation status based on IE requirements and nine common institutional variables (instruction expenses per FTE, academic support expenses per FTE, institutional support expenses per FTE, student service expenses per FTE, IT expenses per FTE, percent students receiving state/local/institutional grant aid, percent students receiving federal loans, institutional level, and institutional type)?

As with the first research question, only one of the nine institutional variables explored in this study was found to have a relationship with SACSCOC IE-based accreditation status. Student service expenses per FTE was one of the two variables that were included in the prediction model. Its significant contribution to the model as shown on Table 4.21 was smaller than that of retention rate. The impact of student service expenses per FTE on SACSCOC IE-based accreditation status seemed to be supported by a number of previous studies. It is important to clarify that such studies did not directly explore the relationship between institutional expenditures and compliance with institutional effectiveness requirements. Instead, they investigated the relationship between institutional expenditures and key student outcomes such as retention and graduation rates, which are undoubtedly essential for institutional effectiveness. Although SACSCOC does not specify retention and graduation benchmarks as some accrediting agencies do when describing their IE requirements, it is understood that an institution that is fulfilling its mission would be retaining and graduating a high percentage of its students. This is congruent with the Combined EHE/I-E-O model because student services are part of the environment that students help shape through their inputs. Improved programs and services (based on assessment and information use) that benefit students lead to better outcomes and achievements as they help retain and graduate more students. Similar to the argument made in the previous section, using assessment data to inform program and service decisions would be a direct benefit of an IE culture.

With the above clarification made, studies have shown that institutional expenditures, including student service expenses, were related to retention (Chen, 2011)

as well as student engagement and learning outcomes (Pike, Kuh, McCormick, Ethington, & Smart, 2011). It must be noted that Pike et al. (2011) acknowledged inconsistencies in studies of relationships between postsecondary institutions' expenditures and student outcomes. Based on the present study, it is unknown whether IT expenses per FTE is a predictor of SACSCOC IE-based accreditation status, because data on IT expenses per FTE were not available from EDUCAUSE. IT expenses were included in all expense variables as described by IPEDS in Chapter Three. This suggests that interaction effects might have been experienced, had data on IT expenses per FTE been available from EDUCAUSE, because a potential effect of IT expenses per FTE on SACSCOC IE-based accreditation status would have depended on IT spending in other categories (Astin & Antonio, 2012).

Research Question Three Decision

Of all SACSCOC baccalaureate member institutions that were reviewed between 2008 and 2012, what patterns, if any, emerge that may inform institutional knowledge about the relationship, if any, between their accreditation status based on IE and some of the common student or/and institutional measures mentioned above?

Descriptive statistics found on Table 4.3 show that all 269 institutions reviewed by SACSCOC between 2008 and 2012 provided information about the percentage of their students that received local/state/institutional grant aid through their IPEDS reports. All but six of them also reported their student-to-faculty ratios. IPEDS data on all the other variables were missing for several more institutions ranging from 11 to 49. This seemed to suggest that colleges and universities found it more important to share information about what proportion of their students were receiving

local/state/institutional grant aid or how many students were assigned to each faculty member. A surprising number of those postsecondary institutions, about 18%, were missing data about their selectivity.It is fair to note that while some of the institutions with missing selectivity data appeared to have failed to report them, others were missing those data because they did not admit first-time full-time students in their programs.

The results of the stepwise logistic regression using Wald appeared to recommend that institutions pay more attention to one student variable and one institutional variable when attempting to predict compliance with SACSCOC's IE requirements. Together, student service expenses per FTE and full-time retention rate explained about 16.3% of the variation in SACSCOC IE-based accreditation status. The latter predictor variable had a slightly stronger contribution and supported Theule's (2012) assertion that student variables are more likely to be significant predictors of accreditation status than their institutional counterparts. The finding that the predictive power of the full model improved by only 1.4% from the base model (the model without the study's independent variables) also corroborated Theule's (2012) observation that many extraneous variables may have had some impact on SACSCOC IE-based accreditation status.

Study Limitations

As indicated during the power analysis in Chapter Four, scholars have not yet reached a consensus in terms of the optimal sample size for logistic regression (O'Connell & Gray, 2011). If the 22 cases per predictor variable used in this study were above the range lower limit of 10 suggested by some researchers, they fell below the upper limit of 50 recommended by others. Considering the modesty of the study's findings, one might be inclined to suggest that a larger sample size with a minimum of 50

cases per predictor variable would have generated more confidence in the results of the statistical analyses. However, meeting such a criterion would have required a minimum of 600 baccalaureate institutions (50 cases for each of the 12 independent variables). This in turn would have necessitated data beyond the SACSCOC region, because the entire SACSCOC membership only includes 491 baccalaureate degree offering institutions. This point supports the presumption made in Chapter Four that the removal of institutions with missing data points from the sample had a minimal impact on the study.

Although studies show that IE is the requirement for which most SACSCOC institutions have received sanctions in recent years, non-compliance is still a relatively rare occurrence. As found in Chapter Four, only 12.3% of the institutions sampled in this study received IE-related negative actions from SACSCOC between 2008 and 2012. This is a potential problem for logistic regression where sample size per outcome plays a key role in the validity of the underlying prediction (O'Connell & Gray, 2011). This implies that increasing the proportion of non-compliant institutions to around 50% might have improved the predictive power of the resulting model.

Another limitation for the present study is the lack of clear and agreed upon definition of IE in the literature. The fact that the base model discussed in Chapter Four predicts SACSCOC IE-based accreditation status with 89.1 percent accuracy suggests that some extraneous variables may be better predictors than the ones used in the study. Having a clear definition of IE might have provided some insight as to what the extraneous variables might have been.

Recommendations

Findings from the current study present several opportunities for higher education in an era of accountability. I propose four main recommendations as a result of this study: (a) operationalize a consistent definition of institutional effectiveness (IE) across higher education, (b) clarify metrics used to assess IE, (c) leverage technology to further teaching and learning, and (d) add IT expenditures to the IPEDS database. Beyer and Gilmore (2007) asserted that there were no silver bullets to assessing complex and generally non-linear higher education outcomes. Postsecondary education outcomes assessment is a key component of IE. Existing studies have established that IE definitions as well as sources of those definitions have been partially blamed for colleges and universities' struggles with IE (Cameron, 1978; Hom, 2011; Volkwein, 2010b). Hence, a logical first opportunity might be for key higher education stakeholders to acknowledge that accountability and IE are here to stay (Moore, 1986; Todd & Baker III, 1998) and come together in an effort to reach a consensus on a definition of IE. This would not be novel because the higher education community has done it in the past. Specifically, it has come together recently to comment on metrics that will be used to rate colleges and universities in the context of the Postsecondary Institutions Ratings System (PIRS). The Council of Regional Accrediting Commissions (C-RAC), which is a collaboration platform for regional accreditors, another important higher education stakeholders group, has also demonstrated they could agree on some common term definitions.

Once the higher education community agrees on the definition of IE, the second opportunity might be to clarify the metrics that will be used to assess IE. Such metrics

should be sensitive to the limitations of one-size-fits-all approaches because each college or university has its unique identity (Hoover, 2009). They should be a combination of standardized and unstandardized approaches, but also include both quantitative and qualitative components (Volkwein, 2010b). Quantitative evidence of IE could be in the form of retention, graduation, career placement, or graduate school admission. In terms of qualitative evidence, Categories 6 and 7 of the Excellence in Higher Education (EHE) framework (Ruben, 1994) described in Chapter One could provide some guidance. While Category 6 would provide guidance about the use of assessment to inform decision making, Category 7 would help guide the higher education community on documenting evidence of quality and effectiveness. As Astin and Antonio (2012) argued in describing the Input-Environment-Output (I-E-O) model, it would not be enough to collect non-actionable data or actionable data that are not used to inform decision making. They also posit that assessment would be inadequate if it included outcome data, but neither input data nor data about the educational environment where student experiences take place. Fully taking advantage of the opportunity to clarify IE metrics would require that postsecondary education stakeholders acknowledge the fact that each metric or approach will have its critics. Technology could play a role toward consensus building.

Leveraging technology to enhance teaching and learning could be the third opportunity area. If there is no evidence of a correlation between technology and student learning outcomes (Werth & Werth, 2011), there is enough data demonstrating that technology has transformed research and instructional delivery in higher education. For example, Mills' (2008) study found that productivity increased at research institutions as a result of information technology (IT) resources utilization. Technology has also been

used to add to or enhance existing pedagogical approaches (Andrade, 2011; Jones & Wellman, 2010). Colleges and universities have had to adopt technologies faster than anticipated because of demands from their millennial student population (Berk, 2010; Lippincott, 2010). Millennials are believed to engage, collaborate, and connect better when technology is involved (Andrade, 2011; Jones & Wellman, 2010; Lippincott, 2010). The impact of technology on postsecondary education is significant enough that the U.S. Department of Education has developed a plan to foster technology and prepare workers who are competitive in the 21st century knowledge economy (Kanter, 2011). Mills (2008) asserted that IT expenditures in higher education were projected to be around seven billion dollars in 2006. This figure is significant considering that the federal government spent a total of 47 billion dollars in higher education funding in 2013.

It is in light of all of these technology-related developments that the next recommendation would be for the National Center for Education Statistics (NCES) to add IT expenditures to its IPEDS database. This would require that NCES separate IT expenditures from other expense categories, but also that Title IV institutions disaggregate IT spending from all other types of spending. Colleges and universities that are EDUCAUSE members would already be prepared to implement this recommendation, because reporting total IT expenditures is an EDUCAUSE requirement as of 2013. Together these efforts could help advance research on the impact of technology on postsecondary education outcomes.

Implications for Practice and Further Research

Although the study's findings do not make a strong case for why the public has continued to rely on many of the independent variables investigated, they do have several

implications. The study provides avenues for current higher education stakeholders as well as future researchers. Implications for practice can be subdivided into implications for college and university practitioners, students and their families, and policy makers and accreditors.

Implications for College and University Practitioners

Faculty, staff, and administrators are the higher education practitioners who are referred to above. The finding that student service expenses per FTE and full-time retention rate were predictors of SACSCOC IE-based accreditation status suggests that directing more efforts toward those factors can reap some benefits. That is, maintaining or increasing current levels of funding for student services would help colleges and universities be more effective. This finding was not surprising because, intuitively, spending on activities that would add value to students' emotional, physical, intellectual, cultural, and social well-being would not only help retain them, but it would facilitate their progress toward outcomes achievement as well. A surprising finding that may have some implications for higher education practitioners was the non-significance of percent students receiving state, local, and/or institutional grant aid. The perceived importance of state/local/institutional grant aid to colleges and universities was underscored, as illustrated on Table 4.3, by the fact that percent students receiving state/local/institutional grant aid was the only study's IPEDS variable for which no data was missing. To be clear, higher proportions of students receiving state, local, and/or institutional grant aid or larger amounts of grant aid may attract more students but may not predict an institution's compliance with SACSCOC's IE requirements.

If accountability and IE are here for the long-term future as suggested in the literature and if postsecondary institutions continue to be challenged by IE requirements, the status quo will increasingly be unsustainable. There are at least three reasons why this would be untenable. First, institutions that engage in institutional effectiveness activities as a result of citations from accreditors or regulators typically spend more resources than they otherwise would if they had initiated continuous improvement efforts on their own. Second, with continuous IE struggles higher education will continue to be less competitive for government funding, a larger proportion of which will keep being allocated to other social programs such as Medicaid, K-12 education, and public safety (Carey, 2007). Third, postsecondary institutions' indifference to IE will lead to more graduates who are not as competitive in the 21st Century economy as their peers from other countries (Kanter, 2011; Liu, 2011b; National Commission on Excellence in Education, 1983).

College and university practitioners could start addressing the IE challenges with two things. First, they could collaborate with their respective accrediting agencies to clarify IE processes. The lack of clear patterns to inform institutional knowledge from the study may be an indication that more specifications need to be provided to colleges and universities as to what exactly to do in order to meet all SACSCOC IE requirements. Second, considering that some higher education institutions have been known to engage in assessments for the purpose of satisfying external stakeholders (Hanson & Mohn, 2011), to conduct assessments that yield no actionable data (Astin & Antonio, 2012; Head & Johnson, 2011), or to be satisfied with gathering data and not using them to inform decision making (Volkwein, 2010a), a change of approach may be helpful.

Genuinely focusing on internal improvements that are in alignment with their missions would go a long way toward meeting SACSCOC's IE requirements. That is because such efforts would be congruent with the rationale behind SACSCOC's Quality Enhancement Plan (QEP), which in turn is consistent with the components of the Combined EHE/I-E-O model described in Chapter One.For example, postsecondary institutions' commitment to internal improvement efforts would require that they adhere to the sixth criterion of the IHE (Assessment and Information Use) by assessing and using findings to inform improvement decisions. Doing this on a continuous basis would not only help foster an IE culture within the institutions, but it would most likely lead to more positive accreditation status outcomes related to IE requirements.

Implications for Students and their Families

Existing studies have shown that students and their parents use any accessible indicators to judge the quality of a college or university when direct measures are not available (Cameron, 1986). Although student service expenses per FTE and full-time retention rate are not direct measures of student learning, based on the present study, they appear to be modestly reliable predictors of effective SACSCOC institutions. In comparing two institutions based on this study's findings, students and their families should choose the one that has a higher full-time retention rate or that spends more money on student services per FTE. This is supported by a number of earlier studies. The area and level of financial expenditures within postsecondary institutions have an impact on student persistence and degree completion (Ryan, 2004). This is corroborated by a study by Pike et al. (2011), which found a modest correlation between student activities spending and undergraduate students' learning and development. The strongest

case for the importance of student service expenses came from Chen's (2011) study according to which there is a negative correlation between student service expenditures and student dropout rate. Another implication for students and their families is that they will continue to rely on old indicators of quality when selecting their postsecondary institutions.

Implications for Policy Makers and Accreditors

The Morrill Act, the GI Bill, Title VI of the Civil Rights Act, and Title IV also known as the Higher Education Act of 1965 are all examples of policies that the federal government has implemented to leverage access, affordability, and quality in higher education. The federal government has relied on accrediting agencies to play the gate keeping role for its financial investment in postsecondary education. This study shows that the percentage of students receiving federal loan aid is not a predictor of quality in the SACSCOC region. Could the federal government or policy makers do more to foster an IE culture in higher education while avoiding or minimizing the perception of imposing an accountability system on higher education? Should an entity outside of the academy get involved in creating a system for the purpose of making colleges and universities responsible for their outcomes, history shows that it would be critical to get buy-in from postsecondary education's faculty, staff, and administrators. A number of previous studies help illustrate this point.

Sources of the definition of IE have been found to be a barrier to IE implementation in higher education (Cameron, 1978; Hom, 2011; Volkwein, 2010b). IE challenges in postsecondary education continued despite reform recommendations from two high profile reports: *A Nation at Risk: The Imperative for Education Reform*

(National Commission on Excellence in Education, 1983) and *A Test of Leadership: Charting the Future of U.S. Higher Education* (Commission on the Future of Higher Education, 2006). With the PIRS expected to take effect in 2015, it would be desirable for it to have metrics that could be leveraged for IE purposes. The rationale for this desire is the fact that the federal government has given all higher education stakeholders, including faculty, staff, and administrators, the opportunity to weigh into the design of the PIRS. C-RAC could also expand its glossary initiative to include agreement on the definition of IE. Combining the above IE-related ideas from the PIRS and C-RAC could help higher education get over some of the IE challenges it has faced to date.

Implications for Further Research

Research implications for the present study include increasing the sample size but also investigating relationships among some of the variables used. As cautioned in the *Limitations* section of this chapter, even including all SACSCOC member institutions that offer baccalaureate degrees may not be enough to reach the minimum of 50 institutions per predictor variable that some scholars have recommended for logistic regression. Consequently, future studies may desire to combine data from two or more accrediting agencies. However, the current lack of agreement in IE definitions and metrics make this problematic. At the very minimum, this would require that accreditors have similar IE requirements. There are two reasons why this would not be impossible. First, the North Central Association of Colleges and Schools' (NCA) Higher Learning Commission's (HLC) Academic Quality Improvement Program (AQIP) is a similar concept to SACSCOC's QEP. Second, the recent C-RAC glossary developments give

hope that IE will make it to the glossary list and potentially inspire other accreditor types to do the same.

Related future studies should also use data spanning more than five years. Unless such studies use data from more than one accrediting agency, this would be required to reach the recommended threshold sample size. However, this may not be necessary if potential relationships between the independent variables are explored prior to the study. Establishing or understanding relationships between the predictor variables may lead to a reduction in the number of independent variables, which in turn would lower the sample size minimum. For example, a significant correlation between full-time retention rate and graduation rate might suggest that only one of the two variables would be necessary for logistic regression analysis. In the case of the present study, there was a significant Pearson correlation coefficient of 0.753 (p=0.000) at the 0.01 level between the two variables. This may help explain why only one of those variables, full-time retention rate, was found to predict SACSCOC's IE-based accreditation status. Understanding the relationship between the present study's two significant predictors, student service expenses per FTE and full-time retention rate, may be the first step toward verifying this claim. An examination of the correlation between the two variables showed a non-significant Pearson correlation coefficient (p=0.899)between student service expenses per FTE and full-time retention rate at the 0.05 level. Although this finding supported the above hypothesis, more research is needed to confirm its validity.

Conclusion

This study sought to inform students and their parents, colleges and universities, and SACSCOC through an exploration of relationships between accreditation status

based on IE requirements and some common student and institutional variables. The data used were from SACSCOC member institutions that were reviewed in the five-year span between 2008 and 2012. Using binary logistic regression analysis, it was concluded that despite IE being the requirement for which most SACSCOC institutions have increasingly been sanctioned, non-compliance to this requirement was still relatively infrequent. Of the independent variables investigated, only student service expenses per FTE and full-time retention were found to predict SACSCOC IE-based accreditation status. Pending the results of further studies on this topic, the present study has some important corollaries for the higher education community.

Granted that colleges and universities' main purpose is to further teaching and learning, they should foster an IE culture by being more intentional about their student service and retention efforts. In a global village where a correlation has been established between the quality of a country's higher education and its international competitiveness (Liu, 2011b), the first step to producing well educated and highly competitive graduates is to retain students. This is only the first step because while satisfied students would most likely stay in school, student satisfaction should not be mistaken for evidence of student learning.

The next step is for postsecondary institutions to be more intentional and transparent about their outcomes (Welsh & Metcalf, 2003c). Without this effort, colleges and universities would lose the funding competition to social programs such as Medicaid, K-12 education, and public safety (Carey, 2007). It is no secret that public colleges and universities have seen government funding slashed multiple times in recent years as a result of the economic downturn. Funding is not expected to return to pre-recession

levels, even with an economic recovery. The funding cuts have also affected private higher education institutions which rely on Title IV for federal grants and student loans.

Reversing these trends may require that colleges and universities embrace IE. In light of the base model from the present study, it is fair to suggest that clarifying IE metrics may help lift some of the challenges that higher education has faced when dealing with IE implementation. Continuous improvement is a byproduct of IE and it is a bit paradoxical that IE metrics are still unclear at this point. The paradox stems from the fact that "what cannot be measured cannot be improved." Thus, future studies should first focus on bringing more clarity to IE criteria in an effort to (1) facilitate the creation and sustenance of an IE culture in higher education and (2) help return the U.S. to the top in education attainment in the 25-34 age range.

Appendix A: SACSCOC Review Information between 2008 and 2012

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Alice Lloyd College, Pippa Passes, KY	KY	2008	Reaffirmed	II	Private, Not-for-Profit
Anderson University, Anderson, SC	SC	2008	Reaffirmed	V	Private, Not-for-Profit
Baptist College of Florida, Graceville, FL	FL	2008	Reaffirmed	III	Private, Not-for-Profit
Beacon College, Leesburg, FL	FL	2008	Reaffirmed	II	Private, Not-for-Profit
Bellarmine University, Louisville, KY	KY	2008	Reaffirmed	V	Private, Not-for-Profit
Berry College, Mount Berry, GA	GA	2008	Reaffirmed	IV	Private, Not-for-Profit
Bethel University, McKenzie, TN	TN	2008	Reaffirmed	III	Private, Not-for-Profit
Centenary College of Louisiana, Shreveport, LA	LA	2008	Reaffirmed	III	Private, Not-for-Profit
Columbia International University, Columbia, SC	SC	2008	CR 2.12	V	Private, Not-for-Profit
Concordia University Texas, Austin, TX	TX	2008	Reaffirmed	III	Private, Not-for-Profit
Dallas Baptist University, Dallas, TX	TX	2008	Reaffirmed	V	Private, Not-for-Profit
Florida Southern College, Lakeland, FL	FL	2008	Reaffirmed	III	Private, Not-for-Profit
Furman University, Greenville, SC	SC	2008	Reaffirmed	IV	Private, Not-for-Profit
Hampton University, Hampton, VA	VA	2008	Reaffirmed	VI	Private, Not-for-Profit
Kentucky Wesleyan College, Owensboro, KY	KY	2008	Reaffirmed	II	Private, Not-for-Profit
King University, Bristol, TN	TN	2008	CS 3.3.1	III	Private, Not-for-Profit
Lubbock Christian University, Lubbock, TX	TX	2008	Reaffirmed	III	Private, Not-for-Profit
Marymount University, Arlington, VA	VA	2008	Reaffirmed	V	Private, Not-for-Profit
Oglethorpe University, Atlanta, GA	GA	2008	CR 2.12, CS 3.3.1	III	Private, Not-for-Profit
Palm Beach Atlantic University, West Palm Beach, FL	FL	2008	Reaffirmed	V	Private, Not-for-Profit
Paul Quinn College, Dallas, TX	TX	2008	CR 2.5, CR 2.12, CS 3.3.1	II	Private, Not-for-Profit
Randolph-Macon College, Ashland, VA	VA	2008	Reaffirmed	II	Private, Not-for-Profit
Reinhardt University, Waleska, GA	GA	2008	Reaffirmed	III	Private, Not-for-Profit
Saint Catharine College, St. Catharine, KY	KY	2008	Reaffirmed	III	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Texas Lutheran University, Seguin, TX	TX	2008	Reaffirmed	III	Private, Not-for-Profit
The Baptist College of Florida, Graceville, FL	FL	2008	Reaffirmed	III	Private, Not-for-Profit
Trinity University, San Antonio, TX	TX	2008	Reaffirmed	III	Private, Not-for-Profit
Tuskegee University, Tuskegee, AL	AL	2008	Reaffirmed	V	Private, Not-for-Profit
United States Sports Academy, Daphne, AL	AL	2008	Reaffirmed	V	Private, Not-for-Profit
University of Miami, Coral Gables, FL	FL	2008	Reaffirmed	VI	Private, Not-for-Profit
University of Richmond, Richmond, VA	VA	2008	Reaffirmed	V	Private, Not-for-Profit
Wayland Baptist University, Plainview, TX	TX	2008	Reaffirmed	III	Private, Not-for-Profit
Virginia Intermont College, Bristol, VA	VA	2008	CR 2.5, CS 3.3.1	II	Private, Not-for-Profit
Albany State University, Albany, GA	GA	2008	Reaffirmed	IV	Public
Auburn University at Montgomery, Montgomery, AL	AL	2008	Reaffirmed	V	Public
Chipola College, Marianna, FL	FL	2008	Reaffirmed	II	Public
Francis Marion University, Florence, SC	SC	2008	Reaffirmed	IV	Public
Georgia Highlands College, Rome, GA	GA	2008	Reaffirmed	II	Public
Georgia State University, Atlanta, GA	GA	2008	Reaffirmed	VI	Public
Norfolk State University, Norfolk, VA	VA	2008	Reaffirmed	V	Public
South Georgia State College, Douglas, GA	GA	2008	CR 2.12, CS 3.3.1	II	Public
St. Petersburg College, St. Petersburg, FL	FL	2008	Reaffirmed	II	Public
The University of Texas at Austin, Austin, TX	TX	2008	Reaffirmed	VI	Public
The University of Texas at Dallas, Richardson, TX	TX	2008	Reaffirmed	VI	Public
The University of Texas Health Science Center at San Antonio,	TX	2008	Reaffirmed	V	Public
The University of Texas Medical Branch at Galveston, Galveston, TX	TX	2008	Reaffirmed	V	Public
University of Houston, Houston, TX	TX	2008	Reaffirmed	VI	Public
University of Texas at Brownsville-Texas Southmost College,	TX	2008	Reaffirmed	V	Public
Virginia State University, Petersburg, VA	VA	2008	Reaffirmed	V	Public
South University, Savannah, GA	GA	2009	Accredited	V	Private, For-profit

Institution; City, State	State	Review Year	Action	Institution Level	Institution Type
Asbury University, Wilmore, KY	KY	2009	Reaffirmed	IV	Private, Not-for-Profit
Austin College, Sherman, TX	TX	2009	Reaffirmed	III	Private, Not-for-Profit
Baptist University of the Americas, San Antonio, TX	TX	2009	CS 3.3.1	II	Private, Not-for-Profit
Barton College, Wilson, NC	NC	2009	Reaffirmed	III	Private, Not-for-Profit
Bennett College for Women, Greensboro, NC	NC	2009	Reaffirmed	II	Private, Not-for-Profit
Brescia University, Owensboro, KY	KY	2009	CS 3.3.1	III	Private, Not-for-Profit
Chowan University, Murfreesboro, NC	NC	2009	Reaffirmed	III	Private, Not-for-Profit
Concordia College Alabama, Selma, AL	AL	2009	CR 2.5, CS 3.3.1	II	Private, Not-for-Profit
Duke University, Durham, NC	NC	2009	Reaffirmed	VI	Private, Not-for-Profit
East Texas Baptist University, Marshall, TX	TX	2009	Reaffirmed	III	Private, Not-for-Profit
Faulkner University, Montgomery, AL	AL	2009	Reaffirmed	V	Private, Not-for-Profit
Fisk University, Nashville, TN	TN	2009	Reaffirmed	III	Private, Not-for-Profit
Flagler College, St. Augustine, FL	FL	2009	Reaffirmed	II	Private, Not-for-Profit
Lambuth University, Jackson, TN	TN	2009	CR 2.5, CR 2.12	II	Private, Not-for-Profit
Limestone College, Gaffney, SC	SC	2009	Reaffirmed	III	Private, Not-for-Profit
Lincoln Memorial University, Harrogate, TN	TN	2009	Reaffirmed	V	Private, Not-for-Profit
Martin Methodist College, Pulaski, TN	TN	2009	Reaffirmed	II	Private, Not-for-Profit
McMurry University, Abilene, TX	TX	2009	Reaffirmed	III	Private, Not-for-Profit
Methodist University, Fayetteville, NC	NC	2009	Reaffirmed	III	Private, Not-for-Profit
Morehouse College, Atlanta, GA	GA	2009	Reaffirmed	II	Private, Not-for-Profit
Our Lady of Holy Cross College, New Orleans, LA	LA	2009	Reaffirmed	V	Private, Not-for-Profit
Our Lady of the Lake College, Baton Rouge, LA	LA	2009	Reaffirmed	III	Private, Not-for-Profit
Regent University, Virginia Beach, VA	VA	2009	Reaffirmed	VI	Private, Not-for-Profit
Rhodes College, Memphis, TN	TN	2009	Reaffirmed	III	Private, Not-for-Profit
Schreiner University, Kerrville, TX	TX	2009	Reaffirmed	III	Private, Not-for-Profit
Shenandoah University, Winchester, VA	VA	2009	Reaffirmed	VI	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Talladega College, Talladega, AL	AL	2009	Reaffirmed	II	Private, Not-for-Profit
Texas Chiropractic College, Pasadena, TX	TX	2009	Reaffirmed	V	Private, Not-for-Profit
The College of Saints John Fisher and Thomas More, Fort Worth, TX	TX	2009	Reaffirmed	II	Private, Not-for-Profit
Toccoa Falls College, Toccoa Falls, GA	GA	2009	Reaffirmed	II	Private, Not-for-Profit
Washington and Lee University, Lexington, VA	VA	2009	Reaffirmed	V	Private, Not-for-Profit
Webber International University, Babson Park, FL	FL	2009	CR 2.5, CS 3.3.1	III	Private, Not-for-Profit
Florida Agricultural and Mechanical University, Tallahassee, FL	FL	2009	Reaffirmed	VI	Public
Georgia Gwinnett College, Lawrenceville, GA	GA	2009	Accredited	II	Public
Kentucky State University, Frankfort, KY	KY	2009	Reaffirmed	III	Public
Louisiana State University Health Sciences Center at Shreveport, Shreveport, LA	LA	2009	Accredited	VI	Public
New College of Florida, Sarasota, FL	FL	2009	Reaffirmed	II	Public
North Carolina Central University, Durham, NC	NC	2009	Reaffirmed	V	Public
Northern Kentucky University, Highland Heights, KY	KY	2009	Reaffirmed	V	Public
Sam Houston State University, Huntsville, TX	TX	2009	Reaffirmed	V	Public
Southern Polytechnic State University, Marietta, GA	GA	2009	Reaffirmed	III	Public
Texas Tech University Health Sciences Center, Lubbock, TX	TX	2009	Reaffirmed	VI	Public
The University of Louisiana at Monroe, Monroe, LA	LA	2009	Reaffirmed	VI	Public
The University of Texas Southwestern Medical Center, Dallas, TX	TX	2009	Reaffirmed	VI	Public
Troy University, Troy, AL	AL	2009	Reaffirmed	V	Public
University of Mississippi, University, MS	MS	2009	Reaffirmed	VI	Public
University of North Florida, Jacksonville, FL	FL	2009	Reaffirmed	V	Public
University of South Carolina Beaufort, Bluffton, SC	SC	2009	Reaffirmed	II	Public
Bauder College, Atlanta, GA	GA	2010	CS 3.3.1, CS 3.3.2	II	Private, For-profit
The Art Institute of Atlanta, Atlanta, GA	GA	2010	Reaffirmed	II	Private, For-profit
Wade College, Dallas, TX	TX	2010	Reaffirmed	II	Private, For-profit
Ave Maria University, Ave Maria, FL	FL	2010	Accredited	V	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Belmont Abbey College, Belmont, NC	NC	2010	Reaffirmed	II	Private, Not-for-Profit
Bethune-Cookman University, Daytona Beach, FL	FL	2010	Reaffirmed	III	Private, Not-for-Profit
Cabarrus College of Health Sciences, Concord, NC	NC	2010	Reaffirmed	II	Private, Not-for-Profit
Clearwater Christian College, Clearwater, FL	FL	2010	Reaffirmed	III	Private, Not-for-Profit
Criswell College, Dallas, TX	TX	2010	CR 2.5, CR 2.12, CS 3.3.1	III	Private, Not-for-Profit
Cumberland University, Lebanon, TN	TN	2010	Reaffirmed	III	Private, Not-for-Profit
Dillard University, New Orleans, LA	LA	2010	Reaffirmed	II	Private, Not-for-Profit
Eastern Mennonite University, Harrisonburg, VA	VA	2010	Reaffirmed	III	Private, Not-for-Profit
Everglades University, Boca Raton, FL	FL	2010	Accredited	III	Private, Not-for-Profit
Florida Christian College, Kissimmee, FL	FL	2010	CR 2.5, CS 3.3.1	II	Private, Not-for-Profit
Graduate Institute of Applied Linguistics, Dallas, TX	TX	2010	Reaffirmed	III	Private, Not-for-Profit
Huntingdon College, Montgomery, AL	AL	2010	Reaffirmed	II	Private, Not-for-Profit
Huston-Tillotson University, Austin, TX	TX	2010	Reaffirmed	II	Private, Not-for-Profit
Jefferson College of Health Sciences, Roanoke, VA	VA	2010	Reaffirmed	III	Private, Not-for-Profit
Kentucky Christian University, Grayson, KY	KY	2010	Reaffirmed	III	Private, Not-for-Profit
Meredith College, Raleigh, NC	NC	2010	Reaffirmed	III	Private, Not-for-Profit
Montreat College, Montreat, NC	NC	2010	CR 2.5, CS 3.3.1	III	Private, Not-for-Profit
North Carolina Wesleyan College, Rocky Mount, NC	NC	2010	Reaffirmed	II	Private, Not-for-Profit
North Greenville University, Tigerville, SC	SC	2010	Reaffirmed	V	Private, Not-for-Profit
Paine College, Augusta, GA	GA	2010	CS 3.3.1	II	Private, Not-for-Profit
Saint Paul's College, Lawrenceville, VA	VA	2010	CR 2.5, CS 3.3.1	II	Private, Not-for-Profit
Salem College, Winston-Salem, NC	NC	2010	Reaffirmed	III	Private, Not-for-Profit
Southern Wesleyan University, Central, SC	SC	2010	Reaffirmed	III	Private, Not-for-Profit
Southwestern Christian College, Terrell, TX	TX	2010	Reaffirmed	II	Private, Not-for-Profit
Tennessee Wesleyan College, Athens, TN	TN	2010	Reaffirmed	III	Private, Not-for-Profit
The Savannah College of Art and Design, Savannah, GA	GA	2010	Reaffirmed	III	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Thomas More College, Crestview Hills, KY	KY	2010	Reaffirmed	III	Private, Not-for-Profit
Tougaloo College, Tougaloo, MS	MS	2010	Reaffirmed	II	Private, Not-for-Profit
Truett McConnell College, Cleveland, GA	GA	2010	Reaffirmed	II	Private, Not-for-Profit
Tusculum College, Greeneville, TN	TN	2010	Reaffirmed	III	Private, Not-for-Profit
Virginia Union University, Richmond, VA	VA	2010	Reaffirmed	V	Private, Not-for-Profit
Watkins College of Art, Design & Film, Nashville, TN	TN	2010	Accredited	II	Private, Not-for-Profit
William Carey University, Hattiesburg, MS	MS	2010	Reaffirmed	V	Private, Not-for-Profit
Xavier University of Louisiana, New Orleans, LA	LA	2010	Reaffirmed	V	Private, Not-for-Profit
Alabama State University, Montgomery, AL	AL	2010	Reaffirmed	V	Public
Florida International University, Miami, FL	FL	2010	Reaffirmed	VI	Public
Fort Valley State University, Fort Valley, GA	GA	2010	Reaffirmed	III	Public
Grambling State University, Grambling, LA	LA	2010	Reaffirmed	V	Public
Lamar University, Beaumont, TX	TX	2010	Reaffirmed	VI	Public
North Carolina Agricultural and Technical State University,	NC	2010	Reaffirmed	VI	Public
Prairie View A&M University, Prairie View, TX	TX	2010	Reaffirmed	VI	Public
South Carolina State University, Orangeburg, SC	SC	2010	Reaffirmed	V	Public
South Texas College, McAllen, TX	TX	2010	Reaffirmed	II	Public
Sul Ross State University, Alpine, TX	TX	2010	CS 3.3.1	III	Public
Tarleton State University, Stephenville, TX	TX	2010	Reaffirmed	V	Public
Tennessee State University, Nashville, TN	TN	2010	CR 2.5, CS 3.3.1	VI	Public
Texas A&M University - Corpus Christi, Corpus Christi, TX	TX	2010	Reaffirmed	VI	Public
Texas State University, San Marcos, TX	TX	2010	Reaffirmed	VI	Public
The University of Louisiana at Lafayette, Lafayette, LA	LA	2010	Reaffirmed	VI	Public
The University of Texas at San Antonio, San Antonio, TX	TX	2010	Reaffirmed	VI	Public
The University of Texas at Tyler, Tyler, TX	TX	2010	Reaffirmed	V	Public
The University of Texas Health Science Center at Houston,	TX	2010	Reaffirmed	VI	Public

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
The University of Texas MD Anderson Cancer Center, Houston, TX	TX	2010	Reaffirmed	V	Public
The University of Texas of the Permian Basin, Odessa, TX	TX	2010	Reaffirmed	III	Public
University of North Carolina at Pembroke, Pembroke, NC	NC	2010	Reaffirmed	III	Public
Valdosta State University, Valdosta, GA	GA	2010	Reaffirmed	V	Public
Virginia Polytechnic Institute and State University, Blacksburg, VA	VA	2010	Reaffirmed	VI	Public
Winston-Salem State University, Winston-Salem, NC	NC	2010	Reaffirmed	V	Public
Victory University, Memphis, TN	TN	2011	Reaffirmed	III	Private, For-profit
Abilene Christian University, Abilene, TX	TX	2011	Reaffirmed	V	Private, Not-for-Profit
Adventist University of Health Sciences-Florida Hospital's University, Orlando, FL	FL	2011	Reaffirmed	III	Private, Not-for-Profit
Aquinas College, Nashville, TN	TN	2011	Reaffirmed	III	Private, Not-for-Profit
Baptist Missionary Association Theological Seminary, Jacksonville, TX	TX	2011	Reaffirmed	III	Private, Not-for-Profit
Belmont University, Nashville, TN	TN	2011	Reaffirmed	VI	Private, Not-for-Profit
Benedict College, Columbia, SC	SC	2011	Reaffirmed	II	Private, Not-for-Profit
Birmingham-Southern College, Birmingham, AL	AL	2011	CS 3.3.1	II	Private, Not-for-Profit
Brenau University, Gainesville, GA	GA	2011	Reaffirmed	V	Private, Not-for-Profit
Brevard College, Brevard, NC	NC	2011	Reaffirmed	II	Private, Not-for-Profit
Brewton-Parker College, Mount Vernon, GA	GA	2011	CR 2.5, CS 3.3.1, CS 3.3.2	II	Private, Not-for-Profit
Campbell University, Buies Creek, NC	NC	2011	Reaffirmed	VI	Private, Not-for-Profit
Christian Brothers University, Memphis, TN	TN	2011	Reaffirmed	III	Private, Not-for-Profit
Claflin University, Orangeburg, SC	SC	2011	Reaffirmed	III	Private, Not-for-Profit
Columbia College, Columbia, SC	SC	2011	Reaffirmed	III	Private, Not-for-Profit
Eckerd College, St. Petersburg, FL	FL	2011	Reaffirmed	II	Private, Not-for-Profit
Edward Waters College, Jacksonville, FL	FL	2011	CS 3.3.1	II	Private, Not-for-Profit
Ferrum College, Ferrum, VA	VA	2011	Reaffirmed	II	Private, Not-for-Profit
Freed-Hardeman University, Henderson, TN	TN	2011	Reaffirmed	IV	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Houston Baptist University, Houston, TX	TX	2011	CR 2.5, CR 2.12, CS 3.3.1, CS 3.3.2	III	Private, Not-for-Profit
Life University, Marietta, GA	GA	2011	Reaffirmed	V	Private, Not-for-Profit
Livingstone College, Salisbury, NC	NC	2011	Reaffirmed	II	Private, Not-for-Profit
Louisiana College, Pineville, LA	LA	2011	CR 2.5, CS 3.3.1	III	Private, Not-for-Profit
Lynn University, Boca Raton, FL	FL	2011	Reaffirmed	V	Private, Not-for-Profit
Mars Hill University, Mars Hill, NC	NC	2011	Reaffirmed	III	Private, Not-for-Profit
Queens University of Charlotte, Charlotte, NC	NC	2011	Reaffirmed	III	Private, Not-for-Profit
Randolph College, Lynchburg, VA	VA	2011	Reaffirmed	III	Private, Not-for-Profit
Saint Augustine's University, Raleigh, NC	NC	2011	Reaffirmed	III	Private, Not-for-Profit
Saint Leo University, Saint Leo, FL	FL	2011	Reaffirmed	V	Private, Not-for-Profit
Southeastern University, Inc., Lakeland, FL	FL	2011	Reaffirmed	III	Private, Not-for-Profit
Southern Methodist University, Dallas, TX	TX	2011	Reaffirmed	VI	Private, Not-for-Profit
Southwestern Baptist Theological Seminary, Fort Worth, TX	TX	2011	Reaffirmed	V	Private, Not-for-Profit
Spelman College, Atlanta, GA	GA	2011	Reaffirmed	II	Private, Not-for-Profit
Stetson University, DeLand, FL	FL	2011	Reaffirmed	V	Private, Not-for-Profit
Sweet Briar College, Sweet Briar, VA	VA	2011	Reaffirmed	III	Private, Not-for-Profit
Tulane University, New Orleans, LA	LA	2011	Reaffirmed	VI	Private, Not-for-Profit
Young Harris College, Young Harris, GA	GA	2011	Reaffirmed	II	Private, Not-for-Profit
Alcorn State University, Lorman, MS	MS	2011	Reaffirmed	IV	Public
Athens State University, Athens, AL	AL	2011	Reaffirmed	II	Public
East Georgia State College, Swainsboro, GA	GA	2011	Reaffirmed	II	Public
Elizabeth City State University, Elizabeth City, NC	NC	2011	Reaffirmed	III	Public
Fayetteville State University, Fayetteville, NC	NC	2011	Reaffirmed	V	Public
Florida Gateway College, Lake City, FL	FL	2011	Reaffirmed	II	Public
George Mason University, Fairfax, VA	VA	2011	Reaffirmed	VI	Public

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Gulf Coast State College, Panama City, FL	FL	2011	Reaffirmed	II	Public
Jackson State University, Jackson, MS	MS	2011	Reaffirmed	VI	Public
Morehead State University, Morehead, KY	KY	2011	Reaffirmed	V	Public
Northwest Florida State College, Niceville, FL	FL	2011	Reaffirmed	II	Public
Polk State College, Winter Haven, FL	FL	2011	Reaffirmed	II	Public
Southern University at New Orleans, New Orleans, LA	LA	2011	Reaffirmed	III	Public
Stephen F. Austin State University, Nacogdoches, TX	TX	2011	Reaffirmed	VI	Public
Texas Southern University, Houston, TX	TX	2011	Reaffirmed	VI	Public
The University of Georgia, Athens, GA	GA	2011	Reaffirmed	VI	Public
The University of Tennessee at Chattanooga, Chattanooga, TN	TN	2011	Reaffirmed	VI	Public
The University of West Alabama, Livingston, AL	AL	2011	CS 3.3.1	IV	Public
University of Mississippi Medical Center, Jackson, MS	MS	2011	Reaffirmed	VI	Public
University of Montevallo, Montevallo, AL	AL	2011	Reaffirmed	IV	Public
University of South Carolina - Aiken, Aiken, SC	SC	2011	Reaffirmed	III	Public
University of South Carolina - Columbia, Columbia, SC	SC	2011	Reaffirmed	VI	Public
University of South Florida Sarasota-Manatee, Sarasota, FL	FL	2011	Accredited	III	Public
University of South Florida St. Petersburg, St. Petersburg, FL	FL	2011	Reaffirmed	III	Public
Winthrop University, Rock Hill, SC	SC	2011	Reaffirmed	IV	Public
Florida National University, Hialeah, FL	FL	2012	Reaffirmed	III	Private, For-profit
Miami International University of Art & Design, Miami, FL	FL	2012	Reaffirmed	III	Private, For-profit
Austin Graduate School of Theology, Austin, TX	TX	2012	Reaffirmed	III	Private, Not-for-Profit
Bridgewater College, Bridgewater, VA	VA	2012	Reaffirmed	II	Private, Not-for-Profit
Christendom College, Front Royal, VA	VA	2012	Reaffirmed	III	Private, Not-for-Profit
Embry-Riddle Aeronautical University, Daytona Beach, FL	FL	2012	Reaffirmed	V	Private, Not-for-Profit
Erskine College, Due West, SC	SC	2012	CR 2.5, CS 3.3.1, CS 3.3.2	V	Private, Not-for-Profit
Florida Memorial University, Miami Gardens, FL	FL	2012	Reaffirmed	III	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Georgetown College, Georgetown, KY	KY	2012	Reaffirmed	III	Private, Not-for-Profit
Greensboro College, Greensboro, NC	NC	2012	CS 3.3.1	III	Private, Not-for-Profit
Jarvis Christian College, Hawkins, TX	TX	2012	CS 3.3.1	II	Private, Not-for-Profit
Lenoir-Rhyne University, Hickory, NC	NC	2012	Reaffirmed	III	Private, Not-for-Profit
Memphis College of Art, Memphis, TN	TN	2012	CR 2.5, CS 3.3.1	III	Private, Not-for-Profit
Mid-Continent University, Mayfield, KY	KY	2012	CS 3.3.1	III	Private, Not-for-Profit
Milligan College, Milligan College, TN	TN	2012	Reaffirmed	III	Private, Not-for-Profit
Millsaps College, Jackson, MS	MS	2012	Reaffirmed	III	Private, Not-for-Profit
Mississippi College, Clinton, MS	MS	2012	Reaffirmed	V	Private, Not-for-Profit
Morris College, Sumter, SC	SC	2012	Reaffirmed	II	Private, Not-for-Profit
Mount Olive College, Mount Olive, NC	NC	2012	Reaffirmed	III	Private, Not-for-Profit
Newberry College, Newberry, SC	SC	2012	CR 2.5, CS 3.3.1	II	Private, Not-for-Profit
Oakwood University, Huntsville, AL	AL	2012	Reaffirmed	III	Private, Not-for-Profit
Our Lady of the Lake University, San Antonio, TX	TX	2012	Reaffirmed	V	Private, Not-for-Profit
Parker University, Dallas, TX	TX	2012	Reaffirmed	V	Private, Not-for-Profit
Pfeiffer University, Misenheimer, NC	NC	2012	Reaffirmed	III	Private, Not-for-Profit
Roanoke College, Salem, VA	VA	2012	Reaffirmed	II	Private, Not-for-Profit
Shorter University, Rome, GA	GA	2012	Reaffirmed	III	Private, Not-for-Profit
Southeastern Baptist Theological Seminary, Wake Forest, NC	NC	2012	Reaffirmed	V	Private, Not-for-Profit
Southern Adventist University, Collegedale, TN	TN	2012	Reaffirmed	V	Private, Not-for-Profit
Southern Virginia University, Buena Vista, VA	VA	2012	Accredited	II	Private, Not-for-Profit
Southwestern Assemblies of God University, Waxahachie, TX	TX	2012	Reaffirmed	III	Private, Not-for-Profit
Stillman College, Tuscaloosa, AL	AL	2012	Reaffirmed	II	Private, Not-for-Profit
Texas College, Tyler, TX	TX	2012	CS 3.3.1	II	Private, Not-for-Profit
Transylvania University, Lexington, KY	KY	2012	Reaffirmed	II	Private, Not-for-Profit
University of Pikeville, Pikeville, KY	KY	2012	Reaffirmed	V	Private, Not-for-Profit

Institution, City, State	State	Review Year	Action	Institution Level	Institution Type
Voorhees College, Denmark, SC	SC	2012	Reaffirmed	II	Private, Not-for-Profit
Warner University, Lake Wales, FL	FL	2012	Reaffirmed	III	Private, Not-for-Profit
William Peace University, Raleigh, NC	NC	2012	Reaffirmed	II	Private, Not-for-Profit
Savannah State University, Savannah, GA	GA	2012	Reaffirmed	III	Public
Atlanta Metropolitan State College, Atlanta, GA	GA	2012	Reaffirmed	II	Public
Coastal Carolina University, Conway, SC	SC	2012	Reaffirmed	III	Public
College of Coastal Georgia, Brunswick, GA	GA	2012	Reaffirmed	II	Public
Edison State College, Fort Myers, FL	FL	2012	CS 3.3.1	II	Public
Georgia Regents University, Augusta, GA	GA	2012	Accredited	VI	Public
Middle Georgia State College, Macon, GA	GA	2012	Accredited	II	Public
Midland College, Midland, TX	TX	2012	CS 3.3.1	II	Public
Mississippi Valley State University, Itta Bena, MS	MS	2012	Reaffirmed	III	Public
Old Dominion University, Norfolk, VA	VA	2012	Reaffirmed	VI	Public
Palm Beach State College, Lake Worth, FL	FL	2012	Reaffirmed	II	Public
Radford University, Radford, VA	VA	2012	Reaffirmed	V	Public
South Florida State College, Avon Park, FL	FL	2012	Reaffirmed	II	Public
Southern University and A & M College at Baton Rouge,	LA	2012	CS 3.3.1	V	Public
The University of North Carolina at Asheville, Asheville, NC	NC	2012	Reaffirmed	III	Public
University of Houston-Clear Lake, Houston, TX	TX	2012	Reaffirmed	V	Public
University of North Alabama, Florence, AL	AL	2012	Reaffirmed	IV	Public
University of North Georgia, Dahlonega, GA	GA	2012	Accredited	V	Public
University of South Carolina Upstate, Spartanburg, SC	SC	2012	Reaffirmed	III	Public

Note. Source: SACSCOC, 2014.

Appendix B: Institutions with Missing Data and Associated Imputation Results

Institution	Missing Data and Imputation Results
Chipola College	Missing selectivity data for 2008. Imputation did not work, plan to delete institution from study
Saint Catharine College	Missing selectivity data for 2008. Imputation unsuccessful
South Georgia State College	Missing data on all variables for 2008. Imputation unsuccessful
St Petersburg College	Missing selectivity data for 2008. Imputation unsuccessful
The University of Texas at Brownsville	Missing selectivity data for 2008. Imputation unsuccessful
The University of Texas Medical Branch	Missing data on graduation and retention rates, selectivity, percent receiving local/state/institutional grant aid, percent receiving federal student loans for 2008. Imputation unsuccessful
United States Sports Academy	Missing data on graduation and retention rates, selectivity, percent receiving local/state/institutional grant aid, percent receiving federal student loans for 2008. Imputation unsuccessful
Florida Agricultural and Mechanical University	Missing data on selectivity for 2009 (2008-2009). Imputation consisting of finding selectivity data for any year between 2008 and 2012 and doing average of selectivity for years with data (2010, 2011, and 2012) yielded an average of 57%.
Our Lady of Holy Cross College	Missing data on selectivity for 2009. Imputation using 2011 and 2012 data yielded an average of 45%.
Regent University	Missing data on graduation rate for 2009. Imputation using 2011 and 2012 yielded an average of 35%.
Ave Maria University	Missing graduation rate for 2010. Imputation using 2012, 2011, and 2009 data yielded an average of 52%.
Criswell College	Missing data on all variables for 2010. Imputation unsuccessful.
South Texas College	Missing data on selectivity for 2010. Imputation unsuccessful.
Southwestern Christian College	Missing data on graduation rate and selectivity for 2010. Imputation using 2012, 2009 and 2008 produced an average of 54% on graduation rate and no data on selectivity.
Sul Ross University	Missing data on selectivity for 2010. Imputation

Institution	Missing Data and Imputation Results
	unsuccessful.
The Art Institute of Atlanta	Missing data on the core expenses. Imputation unsuccessful.
The University of Texas MD Anderson Cancer Center	Missing data on all variables but core expenses for 2010. Imputation unsuccessful.
Wade College	Missing data on core expenses and selectivity for 2010. Imputation unsuccessful.
Athens State University	Missing graduation rate, percent of FT first-time undergrads receiving state/local/institutional grant aid, percent of FT first-time undergrads receiving federal student loan aid, selectivity, and FT retention rate for 2011. Imputation unsuccessful.
University of Mississippi Medical Center	Missing graduation rate, percent of FT first-time undergrads receiving state/local/institutional grant aid, percent of FT first-time undergrads receiving federal student loan aid, selectivity, and FT retention rate for 2011. Imputation unsuccessful.
University of South Florida-Sarasota-Manatee	Missing graduation rate, percent of FT first-time undergrads receiving state/local/institutional grant aid, percent of FT first-time undergrads receiving federal student loan aid, selectivity, and FT retention rate for 2011. Imputation unsuccessful.
Baptist Missionary Association Theological Seminary	Missing FT retention rate for 2011. Imputation using 2008 and 2009 data yielded an average of 88%.
Benedict College	Missing selectivity for 2011. Imputation unsuccessful.
East Georgia State College	Missing selectivity for 2011. Imputation using 2008 data yields an average of 100%.
Florida Gateway College	Missing selectivity for 2011. Imputation unsuccessful
Gulf Coast State College	Missing FT selectivity and retention rate for 2011. Imputation for retention using 2008, 2009, and 2010 yielded an average of 67%. Imputation for selectivity unsuccessful.
Lynn University	Missing selectivity for 2011. Imputation using data from 2010 and 2008 yielded an average of 65%.
Northwest Florida State College	Missing selectivity and FT retention rate for 2011. Imputation for retention using 20010, 2009, and 2008 yielded an average of 65%. Imputation for selectivity unsuccessful.
Polk State College	Missing selectivity and FT retention rate for 2011. Imputation for retention using 20010, 2009, and 2008

Institution	Missing Data and Imputation Results
	yielded an average of 64%. Imputation for selectivity unsuccessful.
Southeastern University	Missing selectivity for 2011. Imputation unsuccessful.
Victory University	Missing all core expenses data for 2011. Imputation using data from 2008 and 2009 data yielded the following averages: i. Instruction expenses per FTE: 3138. ii. Academic support expenses per FTE: 746. iii. Student service expenses per FTE: 3401 iv. Institutional support expenses per FTE: 4188.
AI Miami International University of Art and Design	Missing core expenditures and selectivity for 2012. Imputation unsuccessful.
Florida National University-Main Campus	Missing core expenditures and selectivity for 2012. Imputation unsuccessful.
Atlanta Metropolitan State College	Missing selectivity for 2012. Imputation using 2008 and 2009 data yielded an average of 42%.
Edison State College	Missing selectivity and retention rate for 2012. Imputation unsuccessful for selectivity. Imputation for retention using 20010, 2009, and 2008 yielded 61%.
Jarvis Christian College	Missing selectivity for 2012. Imputation unsuccessful.
Savannah State College	Missing selectivity for 2012. Imputation using 2008 data yielded an average of 32%.
South Florida State College	Missing selectivity for 2012. Imputation unsuccessful.
Texas College	Missing selectivity for 2012. Imputation unsuccessful.
University of Pikeville	Missing selectivity for 2012. Imputation unsuccessful.
Austin Graduate School of Theology	Missing selectivity and FT retention rate for 2012. Imputation unsuccessful.
Midland College	Missing selectivity and FT retention rate for 2012. Imputation for selectivity unsuccessful. Imputation for retention using 2011, 2010, 2009, and 2008 yielded an average of 71%.
Palm Beach State College	Missing selectivity and FT retention rate for 2012. Imputation for selectivity unsuccessful. Imputation for retention using 2010, 2009, and 2008 yielded an average of 69%.
Morris College	Missing selectivity for 2012. Imputation unsuccessful.
Parker University	Missing graduation rate, percent FT first-time undergrads receiving state/local/institutional grant aid,

Institution	Missing Data and Imputation Results
	percent FT first-time undergrads receiving federal student loans, selectivity and FT retention rate for 2012. Imputation unsuccessful.
University of Houston-Clear Lake	Missing selectivity and FT retention rate for 2012. Imputation unsuccessful.
Georgia Regents University	Missing data on all variables for 2012. Imputation unsuccessful.
Middle Georgia State College	Missing data on all variables for 2012. Imputation unsuccessful.
Southern Baptist Theological Seminary	Missing data on all variables for 2012. Imputation worked as follows: I. Graduation rate: 58% based on 2012 data II. Percent of FT first-time undergrads receiving state/local/institutional grant aid: 53% based on 2012 data III. Percent of FT first-time undergrads receiving federal student loans: 0% based on 2012 data IV. Instruction expenses per FTE: 5434 based on 2012 data V. Academic support expenses per FTE: 1257 based on 2012 data VI. Student service expenses per FTE: 1576 based on 2012 data VII. Institutional support expenses per FTE: 3699 based on 2012 data VIII. Selectivity: 72% based on 2012 data IX. FT retention: 82% based on 2012 data X. FTE enrollment: 2355 based on 2012 data

Note. Institutions for which imputation was unsuccessful on all variables were removed from the study.

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