

INCREASING EFFICIENCIES AND EFFECTIVENESS IN COMMUNITY  
COLLEGES: PROGRAM REVIEW, PROGRAM COST STUDIES,  
AND THE TRANSFORMATIVE PRACTICES OF LEADERS  
IN TWO COMMUNITY COLLEGES

by

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## ABSTRACT

Community colleges are faced with potential fiscal and institutional crises that demand the development of new business and finance models to greet their second century of existence—models that provide for affordable, high-quality education, and increased graduation rates. This research, using a case study methodology, seeks to understand the processes, the products, and the leadership competencies associated with effective implementation of program review and program cost models at two community colleges, Northwestern Michigan College and Central Piedmont Community College. Each college's model contains key components of new business and finance models that will assist in sustaining other community colleges for the future.

The results of this study indicate each college has developed unique program cost and program review processes that are integrated into their budgeting and strategic planning processes as required by their regional accrediting bodies. Each college found that key factors of efficiencies and effectiveness were improved as a result of the processes. Program elimination did not occur at either college as a result of program review or program cost study processes. This study has also identified that programmatic costs be embedded into program review processes to give each institution a holistic view of the quality and the cost of each of its programs. This inclusion will assist community colleges in their continuing efforts to ensure that their programs meet their mission, vision, and support the sustainability of the institution.

The American Association of Community Colleges Leadership Competencies of Communication and Community College Advocacy were rated as the top competencies by each college for current and future use in the development and integration of program review and program cost model, while the two competencies, Community College Advocacy and Resource Management, respectively, would have greater importance for the future. The conclusions from this study indicate that the AACC leadership competencies remain useful and important for driving improvement in program review and program cost model processes. Study participants also indicated that two additional areas of future leadership emphasis, entrepreneurial and risk taking, were needed. Transformational leadership was viewed as an important leadership style by leaders of these processes.

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## CHAPTER 1

### INTRODUCTION

Community colleges in the United States have historically opened their doors to any and all students since their inception in 1901. The mission of community colleges emphasizes that they are open-access institutions. Yet community colleges are also guided typically by multiple functions that support their mission, including transfer education, occupational education, continuing education, developmental education, and workforce and economic development (Cohen & Braver, 2008; Jacobs, 2009) and, as a result, are the “epicenter of the U.S. post high-school education and training system” (Executive Office of the President’s Council of Economic Advisers, 2009, p. 13). Their overarching mission with these multiple functions has resulted in public support for community colleges that has been strong in the past and continues today, as confirmed by adults on their perceptions of community colleges (Jacobs, 2009). With support for their work, community colleges are widely considered to be the “strategic transformative agents for innovation and as new solutions in economic recovery” (Phelps, 2012, p. 6).

Despite national endorsements and comprehensive missions, community colleges are faced with potential fiscal and institutional crises that demand the imminent development of new community college business and finance models to greet their second century of existence—models that are comprised of new delivery approaches that

provide for affordable, high-quality education and increased graduation and completion rates. The new business and finance models for community colleges “integrate their human, financial, physical, information, and technology resource management and development decisions into core institutional strategies that maximize the empowerment of individuals, businesses, and communities in its service area to achieve their goals” (Myran, n.d.). The Lumina Foundation (2013) confirms that the traditional or old business model of providing postsecondary education cannot be brought to scale affordably to meet the growing demand from students and stakeholders to increase attainment without new and different ways of delivering education (p. 18). These new models may serve to reimagine and recreate multiple components of their organizational, physical, and technological infrastructure into processes, products, and services to deliver new value for the very people who work, use, and engage with the community college (Myran, n.d.). The American Association of Community Colleges (AACC, 2012) report, *Reclaiming the American Dream: Community Colleges and the Nation’s Future*, is direct: Colleges must “redesign their institutions, their mission and their students’ educational experiences” to ensure that they meet the needs of a changing society (p. 12).

With this imperative, community colleges will need to re-invent and create system-wide processes that lead to an exceptional customer value proposition (CVP) for greater efficiencies and improved outcomes for the institution and its students. By examining its academic programs and their associated costs, the life’s blood of any community college, colleges can begin to understand and reinvent their new business and finance models. In this age of the “new normal” post-recession era, colleges will need new business models that are more than simply finding new financial models or ways to

generate revenue. The “do more with less” business model is not the solution (Alfred, 2012).

Students attend community colleges primarily to acquire a degree or certificate or to be trained for a job. In doing so, they take courses in academic programs, comprised of general and developmental education and occupational and transfer education, the key product of community colleges that ultimately should result in the acquisition of skills, knowledge, and competencies that create value as students achieve their goals.

Community colleges therefore must assess and improve the value of their programs for students. Increased pressure by the federal government as well as accrediting bodies to raise low graduation rates has spurred this examination. By developing new tools for program review and examining program costs, community colleges will be better prepared to respond to stakeholder needs for relevant programs for the future and to increase attainment rates.

To undertake new business and finance models for community colleges, it will take future-oriented leadership skills to reinvent community colleges, a national asset, to be more effective for the 21st century (Alfred, 2012; Boggs, 2012). Since the publication of the American Association of Community Colleges’ (AACC) Leadership Competencies in 2005, the United States has undergone major social, political, economic, and financial changes. As a result, community college leaders today may need to learn and utilize new skills as they work to transform themselves and their colleges.

This research, using a case study model, seeks to understand the processes, the products, and the leadership competencies associated with effective implementation of program review and program cost models. These models are key components of the new

business and finance models for community colleges that will enable institutions to remain viable for the future. This study will examine two community colleges, one in Michigan—Northwestern Michigan College (NMC), and one in North Carolina—Central Piedmont Community College (CPCC), to determine how each of these institutions developed and implemented new program cost models and program review processes to meet today’s fiscal and programmatic challenges in order to improve college efficiencies and effectiveness.

## **Background of the Problem**

### **Changing Political, Economic, and Financial Climate**

The United States was “turned on its ear” in 2007-2008 with the start of the “Great Recession” as the nation succumbed to the worst economic conditions since the Great Depression. Job losses, over eight million, were historical in quantity and have yet, as of 2013, to recover to their previous levels. Millions of people in urban and rural America lost their jobs, their homes, and their resources. Out of work and looking to retrain in order to survive, families, with students both young and old, turned to the community college to reconstruct hopefulness for their futures (Merisotis & Wolanin, 2008).

Community colleges have been in the spotlight as never before and are viewed as a solution for America’s future (Goldrick-Rab, Harris, Mazzeo, & Kienzi, 2009; Phelps, 2012). In his July 2009 speech at Macomb Community College in Warren, Michigan, President Obama “threw down the gauntlet” to community colleges to become a driving force in increasing the number of college graduates. The goal set in 2009 was to increase by 2025 the number of community college graduates by 5 million, which would lead a



rise in economic status of our students as a result of their increased earnings from a college degree or certificate.

Colleges, particularly community colleges, saw record enrollments during this period. From 2007 to 2009, community college credit enrollment jumped over 17% nationally (Mullin & Philippe, 2009). Full-time enrollment increased 24.1% from fall 2007 to fall 2009 (Mullin & Philippe, 2009). Historically, during very tough financial times, community colleges have seen an increase in enrollment due to the need and hope for education and retraining. Those that were unemployed due to downsizing, job elimination, or layoffs were able to re-enter college backed with state or federal funding. Parents who might otherwise have sent their high school graduates to a four-year university, due to the economy and the decline in any educational resources they had accumulated, were now left with no choice but to take full advantage of lower tuition rates at the community college (Boggs, 2012).

Despite this previous enrollment growth, trends indicate that the distribution of three common sources of funding from tuition and fees, state, and federal sources have been changing and negatively affecting community colleges and their students. Tuition has historically comprised 25% of a community college's budget, although this overall amount has risen due to dwindling external support and increased tuition rates, which averaged a 5.8% increase from 2011 (Trends in College Pricing, 2012). Tuition and fees have risen faster than the median family income, as taxpayer support is declining (Immerwahr, Johnson, & Gasbarra, 2009).

State and local tax revenue support contributes on average the remaining 75%, according to the *2011 State Higher Education Finance Report* (State Higher Education

Executive Officers Association [SHEEO], 2011). Despite public interest, at the state level, per-student state appropriations reached new lows that predate the 2009 economic downturn (Ladd, 2011, p. ix). Additionally, for community colleges, education and related state expenditures declined from \$8,640 per FTE student (in 2010 dollars) to \$7,650 between 1999-2000 and 2009-10 (Trends in College Pricing, 2012), a decline of almost 12%. At the same time that enrollments were increasing, limited resources strapped most states for the very population who needed financial support the most. Michigan, for example, has seen a 19% decline in state support for higher education from 2007 to 2012 (SHEEO, 2011). SHEEO also reports, “The ‘new normal’ no longer expects to see a recovery of state support for higher education such as occurred in the last half of the 20th century” (p. 48).

At the federal level, while government stimulus funding, provided by the American Recovery and Rehabilitation Act of 2009, provided temporary assistance, it was not adequate to deal with the record number of unemployed. By 2010-2011, funding was either exhausted or severely limited and colleges were resorting to turning students away and raising tuition (Boggs, 2011).

Besides changes in the three primary sources of community college funding, new financial aid restrictions have also complicated the ability of students to attend and persist in college. As tuition rises and limitations and requirements of federal financial aid change, there is increased pressure on students as well as colleges to ensure successful outcomes for students. The Pell Grant, although it remained at its current level of \$5,550 for the 2012-2013 school year, now has tougher qualifications for the full award. Under current legislation, families with incomes of \$30,000 or less automatically qualify for the

full grant. However, for the 2012-2013 school year, the income threshold had been lowered to \$23,000, according to the Department of Education (Fox Business, 2012; Lederman, 2012). Spending money wisely on their education has never been as important to students and parents in the 21st century. Without assurances that education will create positive and life-sustaining results, consumers of education have reacted negatively to the increasing cost as well the value of college.

New solutions in financial aid are also warranted as part of the new business models for community colleges. The Gates Foundation, which has been working to address higher education issues in the last five years, announced in September 2012 grant awards to 14 organizations to examine postsecondary financial aid solutions. The goal of this funding is to “explore policy recommendations, for improving financial aid, so that young people can attend college, become successful students, and ultimately earn valuable postsecondary degrees and credentials.”

**Accountability.** The push for accountability in higher education is not entirely new (Harbour, 2003). Over a century ago, a 1910 Carnegie Report attempted to find a formula to estimate outputs and costs of higher education in order to “measure the efficiency and productivity of educational institutions in a manner similar to that of industrial factories” (Sullivan, Mackie, Massy, & Sinha, 2012, p. 4). The national spotlight on community colleges has brought increased scrutiny.

Despite the earlier 20th century recommendation, colleges and universities in the 21st century have been under mounting pressure from a variety of sources. Key stakeholders, including state and federal governments, accrediting bodies—both national and programmatic, employers, and even the press are asking for outcomes of

performance as never before (Dougherty & Reddy, 2011; Handel, 2008; Immerwahr, Johnson, & Gasbarra, 2008; Pusser & Levin, 2009; Social Program Evaluators and Consultants, 2011; Stack & Leitch, 2011). In 2006, the Spellings Commission Report (2006) made broad recommendations to improve higher education in the 21st century that included creating and maintaining a robust culture of accountability and transparency for higher education and increased performance from accrediting bodies “that require a transformation of accreditation” (p. 15) (Ruben et al., 2008). The report fueled the fire to transform multiple elements of higher education, including accreditation.

While many would agree that community colleges are critical to the economic vitality of their communities and our country, community colleges are not as successful or effective as they and their students would like. Students as well as others are questioning the value of a college education. According to the U.S. Department of Education statistics, in 2008 only 26% of first-time community college students completed a degree or certificate within five years (Altstadt, April 2012). The days of inputs based on growth, i.e., enrollment, are not sufficient to answer the stakeholder demand for community college productivity and quality (Myran, 2009; Sheldon, 2003; Swan, 2009; Toner, 2010). Surging enrollment without completion and increased demands without funding are driving colleges to rethink and retool their services to improve. Colleges are feeling the effects of the new “accountability dimension of institutional effectiveness” efforts (Ewell, 2011; McClenney, McClenney, & Peterson, 2007; Skolits & Graybeal, 2007).

## **The New Business Model and the Customer Value Proposition**

Community colleges are faced with a formidable challenge as they look to improve their institutions due to increased accountability, reduced funding, and political and financial pressures. At the very least, community colleges must confront examination of their fluctuating finances. To the other extreme, they should adopt and implement a full revitalization of their business models as they work to improve the outcomes of their academic programs and services to better serve students. A business model is one that, for its customers, its stakeholders, is highly valued, a customer value proposition (CVP), as it responds effectively to the varying demands of social, financial, political, and economic forces (Myran, 2009, p. 1).

While not a term that is universally adapted or generally favored by community colleges to date, there is growing use of the term *new business model*. It describes the four-pronged, interlocking, and suggested delivery of services and programs centered on the customer value proposition (CVP), comprised of key resources, key processes, and profit formula—that colleges, as well as businesses, should embrace (Johnson, Christensen, & Kagermann, 2008).

The Customer Value Proposition (CVP) from business literature is defined as the unique mix of product, price, service, relationship, and image that a company offers. It defines how the organization differentiates itself from competitors to attract, retain, and deepen relationships with targeted customers. The value proposition is crucial because it helps an organization connect its internal processes to improved outcomes with its customers. (Kaplan & Norton, 2001, p. 93)

Based on the work of Myran (n.d.) and Kaplan and Norton (2001), the three key components of the customer value proposition for the new business models are:

*Key Resources:*

1. Increased resource development that looks to the long-term capacity building, viability, and sustainability of college programs and its students, staff, and faculty and facilities.
2. Increased emphasis on the measurement of every college function and its contribution to student, business, and community success and satisfaction.
3. Increased development of transformative and responsive workforce programming based on changing workforce trends, data, and skill requirements.
4. Shifting emphasis to the distinctiveness of the community college versus other service providers to combat the commodification of higher education services.

*Key Processes:*

1. Shortened business cycles with continuous improvement and transformation of curricular and student services products and processes.
2. Refined and redesigned data management policies, procedures, and systems that will collect, analyze, and report effectively institutional statistics and student performance to internal and external stakeholders.
3. Rebuilt internal audit practices that facilitate internal performance and productivity through data-driven decision making and performance reporting.

*Profit Formula:*

1. Heightened focus on the utilization of every dollar in achieving student success and completion to improve efficiencies and effectiveness for that goal.

2. Restructured tuition rates that accommodate higher cost programs with higher levels of financial aid for low-income students.
3. Maximized and adapted college resources into profit centers through public access to food service, bookstores, sports, arts and theater, and other services.

As Myran (2012) clarifies, “It is a model that creates exceptional value for the college’s customers even as it adapts to the collective influence of emerging social, financial, economic, and political conditions now known as the ‘new normal’” (p. 1). Program review and program cost models that are created and implemented as part of the new business model to transform processes for improved effectiveness along with the leadership skills necessary to implement change and create “exceptional value” are the basis for this study.

### **Statement of the Problem**

The need to develop a new business model for community colleges and their programs is an imperative that can no longer be overlooked. Financially restricted by federal, state, and local allocations, community colleges are seeking new ways of operation that will allow them to meet their mission of open access and, at the same time, offer relevant and rigorous programs to meet student, industry, and employer demand. The following four components comprise the critical elements of this study.

### **Program Cost Models**

Budgeting is “the management process of making collective decisions that distribute resources to enable actions and plan implementation” (White, 2007, p. 13). Within each college’s budgeting process, program cost or program budgets comprise a large share of each institutional budget (Dickeson, 2010, p. 16). A program cost study is a

process of examining the revenue, fees, and associated costs, i.e., salaries, administrative overhead, and benefits that are attributed to a program. By understanding the elements of each program's costs, a college can collectively make more effective decisions for the future by understanding the availability and limitations of its resources to improve efficiencies as part of a new business model.

Academic programs are a community college's core "products." Academic programs are typically defined as a "sequence of educational experiences leading to a degree or certificate" (Barak & Breier, 1990). In order to meet the demands of students, colleges must utilize their current resources and yet simultaneously reconstruct or create new programs without additional funding. SPEC Associates (2011) report in *Year One Evaluation of Lumina Foundation's Higher Education Productivity Work in Seven States*,

Adopting good business practices and documenting the resulting savings can make institutions and systems of higher education more productive. Business models that return significant savings can be used to invest in student success while providing institutions a way of judging both their progress and their efficiency. (p. 17)

Students and stakeholders are keenly interested in the cost of higher education as tuition rates have risen sharply over the last 10 years. This increased accountability is pressing colleges to accurately understand costs while simultaneously trying to determine how they can improve their programs. SHEEO (2011) cautions higher education:

Institutions may cut too many quality corners or compete with each other to raise revenues from "new" sources (such as out of state or international students) rather than make difficult decisions about priorities or the extra effort to implement innovative practices. (p. 48)

Transparency of the costs of a program as well as quality of its outcomes is critical to community college sustainability and to the consumer of its academic programs and its services.



## **Program Review**

In the 2012 Education Advisory Board report, *Revitalizing the Program Portfolio*, 100% of the 110 respondents from colleges and universities stated that they were dissatisfied with academic program review at their institutions. Of those respondents, 60% are currently revising their processes. With the unprecedented pressures to improve their overall performance due to heightened accountability standards, broad strategic goals, and increased competition, colleges are drilling down into their programs as they are looking to them to assist in meeting the accountability standards and outcomes from the “bottom up” (Attis, 2012) while remaining cost-effective, a key element of new business models.

Driven by accrediting agencies and the increased demand for accountability, college administrators and faculty have slowly begun to accept the reality of assessing the effectiveness of programmatic outcomes as well as its costs (White, 2007). Program review is the primary means by which colleges demonstrate their effectiveness in serving the needs of students and their community (Bers, 2011). While acceptance is occurring, the design and process of program review, a key element of institutional effectiveness, has taken on many iterations in most colleges in order to meet the demands of the institution. Unfortunately, many colleges are still struggling to develop an effective review and its accompanying processes that will inform them of future needs for improvement.

The primary forms of program review are (a) standardized program review, a formative internal process, for continuous quality improvement of programs; and (b) summative review, a self-study, that is usually aligned to specialized programmatic

accreditation. Two other forms of program review exist that are used less extensively: (a) outside expert, and (b) mixed program review. As the latter two forms of program review are not used as frequently and are not viewed as professional or objective evaluations, they will not be the focus of this study (Barak & Brier, 1990; Bers, 2011).

It is important that program review as a tool of institutional effectiveness provides information about student outcomes, curriculum currency, and employer support, which are key elements of program review. In this post-recession economy, it should also identify potential efficiencies and resources that the program needs to achieve its outcomes. It is therefore the responsibility of the colleges to determine if the programs meet the needs of their community. Bers (2011) confirms that “in this era of accountability, shrinking financial resources, and greater urgency for community colleges to remain flexible and responsive, program review can inform institutional leaders about what needs to be enriched, revised, improved, maintained, downsized, and even eliminated” (p. 64).

### **Program Review and Program Cost Model Integration**

At a time of increased accountability from the federal government, regional accrediting bodies, and other stakeholders such as employers and legislators, colleges must work to align their processes for maximum efficiency, particularly in the areas of curriculum and finance. These two areas are critical to the effective functioning of community colleges (White, 2007). When academic institutional leaders were asked what was the most challenging aspect of strategic planning, 72% of respondents replied that it was the integration of planning and the budgeting process (Fusch, 2010). Colleges have

to date minimized the scrutiny of programmatic costs and the simultaneous need to marry the processes of programmatic effectiveness with programmatic cost efficiencies.

In 1978, Harvey L. McManis and L. James Harvey wrote in their book *Planning, Management, and Evaluation Systems in Higher Education* of a systematic approach to linking planning, management, and evaluation. Today, over 30 years later, all six regional accrediting agencies of higher education require that colleges be purposeful in their planning. Colleges must identify their outcomes for students and then address how all college units contribute to creating an environment that contributes to and supports learning (Manning, 2011). The North Central Association states in Criterion 5.C.2 that “the institution’s processes for assessment, evaluation, planning, and budgeting are linked effectively,” providing further evidence of the importance of a systemic approach to program review. It is the systematic approach that will provide colleges with the data and information they need to make courageous, responsive, and timely decisions in their efforts to bring value to their stakeholders. McClenney, McClenney, and Peterson (2007) state, “If colleges are going to confront the challenges of their communities by meeting enrollment, employment, and graduation demands, it will take a truly transformational process to implement successfully the results of the budget review process into academic program review” (p. 3).

### **Leadership Competencies for the Future**

Leaders of community colleges are themselves surprised by the overwhelming demands of their positions in these turbulent times (Boggs, 2011). In a recent American Association of Community College (AACC) survey, presidents reported that they do not feel adequately prepared for several aspects of their role (Boggs, 2011). They are not

alone, as other key administrators are faced with daunting decisions and are seeking new leadership skills to guide them through effectively. Eddy (2010) states that many community college leaders turn to business-based leadership theories, which does not always suit their needs.

After two years of work, based on the driving force that 84% of then-current community college presidents would retire in 10 years, the American Association of Community Colleges in 2005 approved its Competencies for Community College Leadership. These competencies are organized into six competency areas:

(1) Organizational Strategy, (2) Resource Management, (3) Communication, (4) Collaboration, (5) Community College Advocacy, and (6) Professionalism. The AACC hoped that administrators and emerging leaders would use the framework to gauge their own development and assess areas of strength and needed areas of improvement. These competencies served as a central framework in this study to examine which of these competencies proved useful in proposing and implementing new program cost and program review models.

Since the publication of AACC's Leadership Competencies in 2005, the question arises whether these competencies are still relevant given the dynamic nature of community college leadership and the complex set of skills required to lead in today's world (McNair, Duree, & Ebbers, 2011). Eddy (2010), in *Community College Leadership: A Multidimensional Model for Leading Change*, suggests that leadership is "multidimensional" and should be viewed within the context of the institution and on a continuum of dimensions. Fullan (2001) states that change leadership is seen through the lens of complexity: "the more complex society gets, the more sophisticated leadership

must become. Complexity means change, but specifically it means rapidly occurring, unpredictable, nonlinear change” (p. 6). Leadership and its complexity will be examined to identify the skills and competencies needed to transform community college program review and program cost models.

### **Purpose of the Study**

The purpose of this study is to determine the key institutional effectiveness practices and processes in use by two community colleges and to determine which leadership competencies proved most useful in the development and utilization of program review and program cost studies in the past and which will require use in the future. This mixed-methods, two-site study examines four key components of community colleges’ transformation in creating new business and finance models: (1) program cost models, (2) program review, (3) integration of cost models and program review, and (4) community college leadership competencies and skills used in the development and implementation of program review and program cost models.

The Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools (NCA) accredits one of the case colleges, Northwestern Michigan College, located in Michigan. The Southern Association of Colleges and Schools (SACS) accredits the other college, Central Piedmont Community College in Charlotte, North Carolina. Each regional accrediting body has its own standards for institutional effectiveness and it will bear examination to determine each college’s approach based on accreditation standards.

Results of this study will provide an understanding of current practices by two community colleges in the following areas: (a) increased attention to efficiency, (b) re-

evaluation of program costs, (c) refined program review processes, (d) integrated processes that impact institutional effectiveness, and (e) the development of a new business model that may be replicated by other community colleges and their leaders interested in improving their college effectiveness and efficiencies for the future.

### **Research Questions**

The six research questions that were formulated to guide this study are categorized as follows: one general question followed by five specific questions related to the four areas of the study:

*How do community college leaders transform program cost models and program review processes to create improved efficiency and/or effectiveness?*

Five additional research subquestions that inform this overall question are:

#### **A. Program Cost Models and Program Review:**

1. What are the new community college program cost models that have been developed to create efficiencies and/or promote effectiveness?
2. What were the stated purposes of the program cost review processes?
3. What are the critical components that led to the successful integration of academic program review processes into the new program cost model for institutional effectiveness?

#### **B. Leadership Competencies:**

1. Utilizing the current AACC competencies as a framework, what leadership competencies led to a successfully integrated process?
2. What additional competencies or approaches were evidenced in successful transformations?

## **Significance of the Problem**

This research is significant because it will suggest approaches that may be useful in responding to the recent radically altered need for metrics and processes, along with the need, due to increased complexity, for enlightened leadership at community colleges. With over 1,100 community colleges in 50 states, it will be worth noting how colleges and states will create and utilize program cost and program review models in the future to drive institutional change and improvement. SPEC Associates for the Lumina Foundation (2011) supports this concept, as it will also be a critical component of the college and statewide efforts to improve productivity: “Improved business models resulting in financial efficiencies are imperative in the face of the fiscal crisis” (p. 19).

As a result of the insight provided from college administrators as they have experienced and analyzed the process development and improvements at their colleges, this study will benefit others in key academic positions in community colleges as they work to improve their own college program review and program cost model processes. It will also serve to identify the skills needed in administrative personnel to drive change for the future. Lastly, the study will articulate what processes are used successfully to integrate key planning components of program and program cost studies into each community college’s efforts to be more effective and efficient organizations.

In this new era for community colleges as they look to the future, it is important to know what leadership competencies are needed to guide and transform a college to meet today’s pressures and demands. What are the skills and knowledge that a leader should have for today’s world? Wallin (2010) speaks to this concern:

Bureaucratic practices built up over the years now stand as barriers. The role of the change leader is to remove barriers and free people to use their strengths to

improve the organization, make it responsive to the community and to regional and national needs, and to look with fresh vision. (p. 5)

### **Delimitations**

This study is limited to two community colleges, one in Michigan and one in North Carolina. The primary criterion for their selection was the intentionality of each college to develop effective and useful program review and program cost models that would inform the colleges, drive change, and improve effectiveness. Interviews are confined to key college administrators whose responsibilities require them to provide significant contributions to program cost models and academic program review processes and activities within their institutions. Each college also has a different accrediting agency, which is another factor that influenced the colleges' approaches.

This study will focus on academic programs and will not include an examination of student support service programs or non-academic areas. There are two primary reasons for limiting the scope of this study. The first reason is academic programs typically comprise the larger share of a college's revenue and thus its budget compared to student support (Bers, 2011). Dickeson (2010) states, "Academic programs (such as degrees offered) are not only the heart of collegiate instruction; they constitute the real drivers of cost for the entire enterprise, academic and non academic" (p. 15). The second reason is that academic programmatic prioritization is a key need for community colleges as they look to utilize their resources effectively. Again, Dickeson points out that "academic programs have been permitted to grow, and in some cases calcify on the instructional body without critical regard to their relative worth" (p. 15).

### **Definition of Terms**

The following terms are concepts and definitions that are important to this study:



*Accountability.* Accountability is the “quality or state of being accountable” (Webster Dictionary, n.d.). Colleges are responsible to their Boards of Trustees, their constituents, and their community for the services they provide and the funding and resources they receive. Colleges must also abide by academic, legal, and ethical standards as defined by the law and accrediting bodies.

*Budgeting.* Budgeting is the “process during which an institution distinguishes between wants and needs and prioritizes needs with regard to immediacy and impact” (Barr & McClellan, 2011, p. 57). The budgeting process culminates in the allocation of resources to the most immediate needs and, when and if available, to other less pressing requests or needs (Barr & McClellan, 2011).

*Customer Value Proposition.* Customer Value Proposition is “the unique mix of product, price, service, relationship, and image that a company offers. It defines how the organization differentiates itself from competitors to attract, retain, and deepen relationships with targeted customers. The value proposition is crucial because it helps an organization connect its internal processes to improved outcomes with its customers” (Kaplan & Norton, 2001, p. 93).

*Institutional Effectiveness.* Institutional effectiveness is the state of having achieved a high standard of performance and quality in terms of student, business, community, and faculty/staff success and satisfaction. Institutional effectiveness is the outcome of continuous improvement based on self-assessment and data-based judgments about institutional quality (Myran, 2009). It is also an “ongoing, integrated, and systematic set of institutional processes that a college uses to determine and ensure the

quality of its academic and support programs and administrative functions” (Bers, 2011, p. 63).

*Leadership.* Leadership is a complex and multi-stranded concept that includes a set of human skills, knowledge, values, and behaviors that can influence individuals and groups to obtain their goals (Wallin, 2010). Community college leadership is the ability to take the traits and skills that have already served to create, nurture, and place community colleges in a strategic position for further prominence in higher education in the United States (Hockaday & Puyear, n.d.).

*Mission Statement.* The mission statement is “the most enduring statement of the college’s social purpose and a crystallized expression of the college’s fundamental strategy” (Myran, Baker, Simone, & Zeiss, 2003, p. 5).

*New Business and Finance Model.* The new business model is how “colleges integrate their human, financial, physical, information, and technology resource management and development decisions into core institutional strategies that maximize the empowerment of individuals, businesses, and communities in its service area to achieve their goals” (Myran, 2012). It is comprised of the Customer Value Proposition, key resources, key processes, and a profit formula.

*Organizational Context.* Organizational context means the specific culture, history, and challenges facing an organization or college (Eddy, 2010, p. 6).

*Organizational Culture.* Organizational culture is a vital element of effective organizational functioning. Culture is a pattern of shared, taken-for-granted, and basic assumptions invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough

to be considered valid, and therefore is taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 2004; White, 2007). Its significance becomes clear as an institutional transforms itself. An organization's culture is "reflected in what is done, how it is done, and who is involved in doing it" (White, 2007, p. 27).

*Process.* A process is a systematic series of actions directed to an end. It is a sequence of interdependent and linked procedures which, at every stage, consume one or more resources (employee time, energy, machines, money) to convert inputs (data, material, parts, etc.) into outputs. These outputs then serve as inputs for the next stage until a known goal or end result is reached (BusinessDictionary.com, n.d.)

*Program Cost Model.* The program cost or cost-to-educate model is a process of examining the revenue, fees, and associated direct costs, i.e., salaries, administrative overhead, and benefits that are attributed to a program. The process results in the development of a tool called the program cost or cost-to-educate model that illustrates the cost of programs on a scale of high cost to low cost. Enrollment and graduation rates may be included in the models.

*Program Review.* Program review is "the type of evaluation of an instructional, instructional support, student service, or administrative program department or unit" (Bers, 2011, p. 63). Program review refers to the evaluative process that will provide multiple data and narrative information about a program's characteristics and goals (Hockaday & Puyear, n.d.). The program review process is also the "appropriate format to make decisions regarding elimination, reduction, continuation or expansion of specific

programs, services, and functions” (Myran et al., 2003). For this study, program review is limited to academic programs only.

*Strategic Planning.* Strategic planning is an organization’s formal process of defining its strategy or direction, determining the best paths to achieve the established goals, and identifying indicators, which measure progress (Grand Rapids Community College, n.d.). It also optimally aligns with other key elements that include financial and resource management and other critical components of the organization (White, 2007).

*Transformational Leadership.* Transformational leadership is “the kind of leadership that gets people to infuse their energy into strategies” (Kouzes & Pozner, 2007, p. 122). It is the ability of the community college president or others to influence the values, attitudes, beliefs, and behaviors of others by working with and through them in order to accomplish the college’s mission and purpose (Roueche, Baker, & Rose, 1989).

### **Organization of the Study**

Chapter 2 provides the literature review for the basis of this study to investigate how two community colleges are integrating their program cost and program reviews into their organizations to improve efficiencies and effectiveness. This chapter will also provide the literature review on the leadership skills and competencies needed to transform community colleges. Chapter 3 describes the methods of qualitative and quantitative research used. Chapter 4 describes the findings of the study based on the two colleges, Northwestern Michigan College and Central Piedmont Community College. Chapter 4 will also analyze the leadership competencies utilized as determined from the results of the 32-question survey. Chapter 5 is a summary of the study and presents a

discussion on the conclusion and recommendations for future development of program review and program cost models and the necessary leadership competencies that were found to be vital to integration and that positively impact institutional effectiveness.

### **Summary**

This chapter introduced the problem that, in order to meet and offset the fiscal, social, and accountability challenges facing community colleges, colleges must develop and implement new program cost models and program review processes in order to improve efficiencies and effectiveness as part of the new business and finance model for community colleges. Leaders of community colleges must also utilize competencies in the development and integration of these processes to become transformative leaders. The chapter introduced the plan to collect, analyze, and interpret data from two community colleges, NMC and CPCC, that are intentional about the integration of their processes and the leadership skills necessary to accomplish this vital work.

## CHAPTER 2

### LITERATURE REVIEW

This literature review was guided by the central question: *How do community college leaders transform program cost models and program review processes to create increased institutional efficiencies and effectiveness?*

Specifically, this chapter reviews the following:

- The background and context of program cost and program review model and process development at community colleges;
- The key issue of accountability required from stakeholders including regional accrediting bodies and employers;
- The integration of program review and program cost processes that create increased efficiencies and effectiveness within community colleges;
- The leadership competencies required for the transformation of community colleges as related to increases in institutional efficiencies and effectiveness.

Through interviews and campus observations at two colleges, this study sought to determine what models, processes, and leadership competencies and approaches were used to develop new program review and program cost models.

## **The Background and Context of Program Cost and Program Review Models and Processes**

### **History of the Community College Mission and Funding**

The Morrill Land Grant of 1862 set the precedent that established tax-supported public institutions of higher education in every state. Community colleges, called junior colleges until the 1940s, in their first two decades of the 20th century were designed to provide access to higher education for those not ready or able to attend four-year universities, as they did not have the necessary preparation for postsecondary education. Their missions typically reflected their primary audiences' needs: broad general education (Cohen & Brawer, 2008; Dassance, 2011, p. 33).

After World War II, community colleges grew in response to the needs of returning soldiers and to train veterans for the postwar era. The GI Bill, a federally supported funding source for veterans to attend college, was implemented in 1944 and increased attendance and demand for the community college. By the 1960s, many community colleges expanded their mission and thus their offerings to include workforce development programs that prepared their students and veterans for new business and industry demands.

This shift to comprehensiveness and multiple functions was not without controversy then as it is now (Cohen & Brawer, 2008; Dassance, 2011; McPhail & McPhail, 2006). Dickeson (2008) likens the expansion of the community college mission to “colleges have purchased a gown that is overlarge by several sizes and they are trying to grow into it” (p. 39). While each community college is different due to many factors that include its demographics, size, governance, and possible statewide coordination, community colleges today are viewed as having six primary service areas that drive their

mission: transfer education, workforce or occupational education, continuing education, student services, developmental education, and community service (Cohen & Brawer, 2008; Dougherty & Townsend, 2006). These multiple functions are at the center of the debate of the role of community colleges and the seemingly impossible task “to be all things to all people.”

Since their inception just over one hundred years ago, community colleges have gone from rapid growth and expansion to facing, in the start of their second century of existence, decreased funding and the need to prioritize their mission components. Dickeson (2008) and others confirm, “the mission of the institution is the academic grid against which all evaluation of programs must be measured” (p. 37) and that “campuses are over-programmed for the resources they enjoy” (p. 50). Boggs (2011) affirmed the need to focus on the institution’s core mission and to stay true to it by cutting extraneous or duplicative programs while also building a stronger fundraising base (p. 6). By examining their programs, their costs, and their alignment to the mission, community colleges will be better able to determine their role in their community and to better serve their students and stakeholders.

**Funding sources and shifts.** The State Higher Education Finance 2011 Study stated:

During the last three years, 2009, 2010, 2011, with the assistance of American Recovery and Rehabilitation Act (ARRA) funding, total state and local support hovered between \$87 and \$88 billion, almost as high as the nearly \$89 billion provided in 2008. In 2011, state and local funding grew enough to offset a decrease in ARRA funds. But 2012 state appropriations are down by 4.0 percent, and when ARRA funds for 2011 are included for comparison, the total is down 7.5%. Total funding (including federal stimulus funds) for 2012 is approximately \$5.9 billion less than provided in 2011. (p. 12)



This decrease has impacted state funding to colleges and universities profoundly. The three primary elements of college financing, full-time equivalency reimbursement, educational appropriations, and net tuition (tuition revenue after scholarships and financial aid), have fluctuated over this same time period with decidedly mixed results for colleges and universities. (Grants and private gifts are an increasingly important part of college budgets; however, they vary from institution to institution and from year to year, and are not considered a major factor in offsetting college general funds expenses.) The State Higher Education Executive Officers (SHEEO, 2011) highlights these changes (Figure 1):

- Full-Time-Equivalent Enrollment (FTE) – Enrollment grew rapidly from 2000-2005, and then slowed slightly in 2006-2007. In 2009 enrollment growth accelerated by 4.2% followed in 2010 by 5.4%. In 2011 this growth slowed to a rate of 2.4%.
- Educational Appropriations – Appropriations per FTE were lower in 2010 and 2011 than in any other year since 1980.
- Net Tuition Revenue (Figure 2) – The rate of net tuition was slower in 2007 and 2008; however, in 2010 and 2011 net tuition grew as a percentage of total educational revenue.

It is with these fluctuations, the rise in tuition rates, and the reliance on net tuition revenue as a major source of income that the State Higher Education Finance Study (2011) cautioned that these elements “may have the potential of reducing opportunity and decreasing the educational attainment of the American people” (p. 21). This concern is also raised by the Lumina Foundation (2013) for its impact on students stating that the

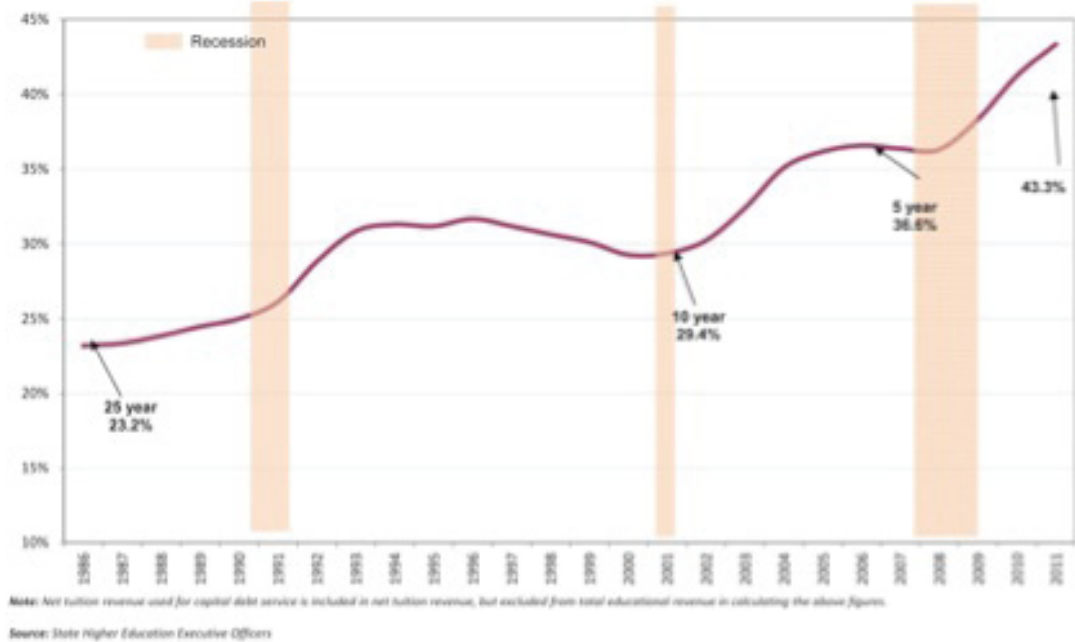


Figure 1. Public FTE enrollment and educational appropriations per FTE, U.S., Fiscal 1986-2011. (SHEEO, 2011)

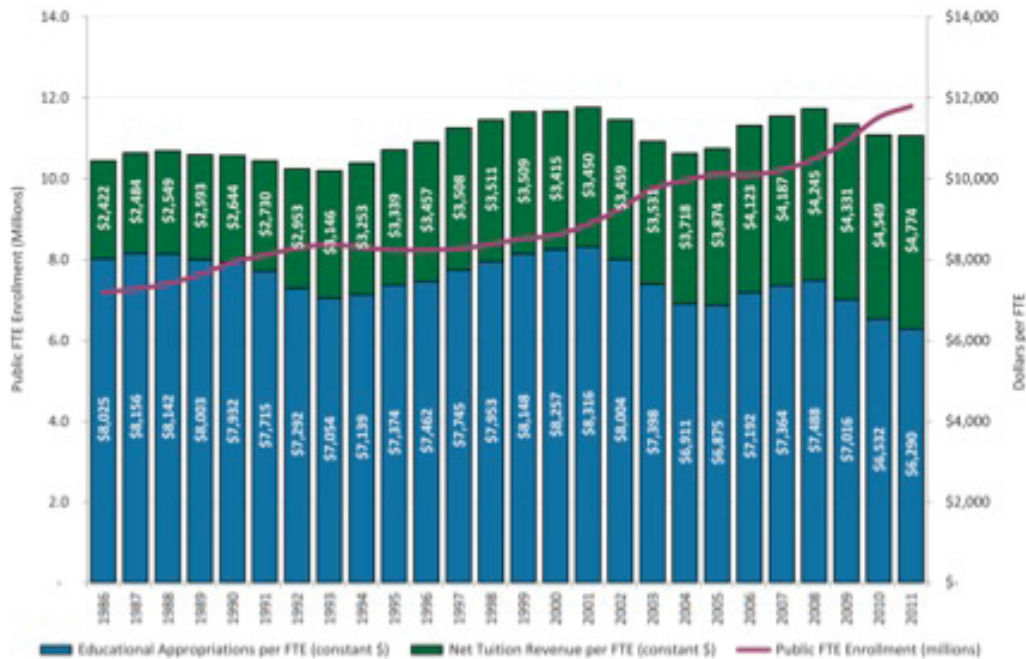
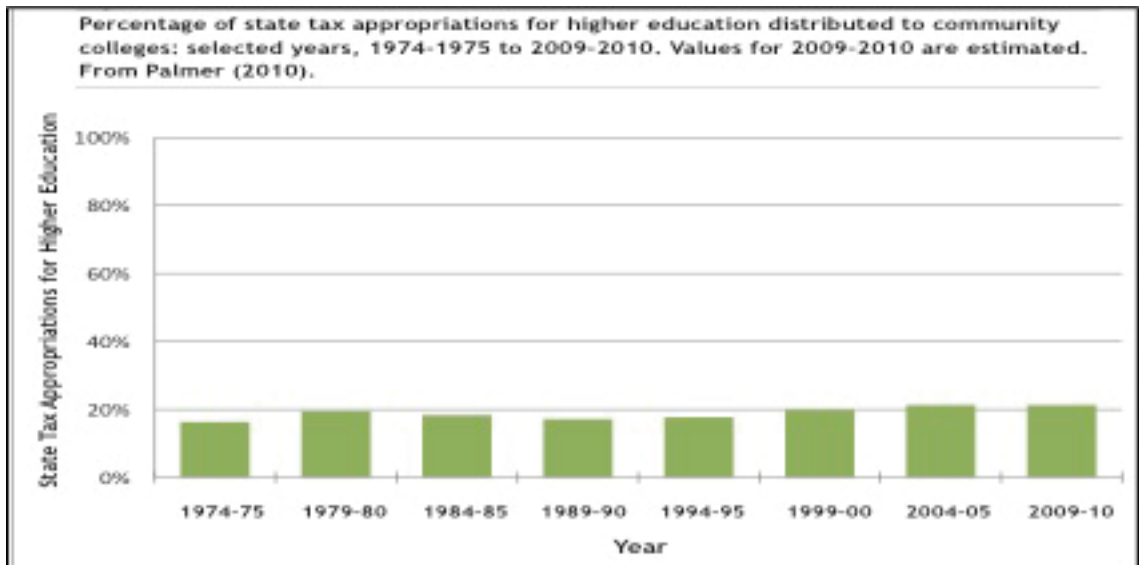


Figure 2. Net tuition as a percent of public higher education total educational revenue, U.S., Fiscal 1986-2011. (SHEEO, 2011)

“nation’s models of financial support have not kept up with the dramatic changes in both the student population and educational systems” (p. 17).

Community colleges historically after World War II, 1945 to the present, have relied upon a mixed funding base, which was comprised of state and federal funds, tax revenues, and, to a lesser degree, tuition and fees. That reliance on mixed funding is now changing. Christopher Mullin (2010) reports in American Association of Community Colleges’ *Doing More with Less: The Inequitable Funding of Community Colleges* that community colleges served 43% of all undergraduates (54% of all undergraduates in public higher education) yet they receive only 27% of total federal, state, and local higher education revenues. With increased pressure to serve more students who are at risk, community colleges are challenged to support themselves and their programs given the limited financial support that they receive compared to other institutions of higher education (Boggs, 2011).

**State funding.** Each community college is allocated state appropriations. The rates have remained consistent at or around 20% since 1974 (Figure 3). As of 2000, 26 states reported that their community college systems depend on local tax funds, usually from property taxes. The other 24 states receive the bulk of their financial support in annual or biennial appropriations from their state legislatures. Every state community college system currently receives some level of state allocation (Bers, 2011, p. 64). In 25 states, local appropriations exceed 10%; with 25 states this distribution is less than 10% (Center for Community College Policy Education Commission of the States, 2000).



*Figure 3.* Percentage of state tax appropriations for higher education. (Mullin, 2010)

Understanding each state’s appropriations process is important to comprehending how each state funds its community colleges (Center for Community College Policy Education Commission of the States, 2000) and how this funding is changing. There are two primary methods of allocating appropriated funds to community colleges. The majority of states, including Arizona, California, Ohio, Michigan, and North Carolina, determine funding through a legislative process or by the state higher education board. Other states must use a legislative hearing process to determine appropriations, although State Board recommendations are considered. The funding source does impact program cost models and the distribution of funding across programs as appropriate.

Appropriations to community colleges are reflected in the state budget either by a single consolidated appropriation to all community colleges in the state, as part of a consolidated higher education appropriation, or as an appropriation to individual colleges such as occurs in North Carolina (Center for Community College Policy Education Commission of the States, 2000). In general, there are two primary uses for a funding

formula. It may be used to determine the total amount of funds appropriated to community colleges (pre-appropriation), or it may be used to determine how allocated funds are distributed to individual institutions (post-appropriation). States either use their formulas in one of these two ways or build a formula that serves both purposes (Center for Community College Policy Education Commission of the States, 2000).

One common model used in higher education for many states such as North Carolina is a full-time student equivalency (FTE) reimbursement rate. Colleges are funded based on the number of full-time students multiplied by the state-allocated FTE allocation, which is set by the state board. Higher FTE reimbursement rates can apply to certain higher-cost programs. Higher enrollment influenced by the economic downturn since 2008 has meant fewer dollars per student in state-supported FTE models. Thirty of 50 states showed a decline in appropriations per full-time-equivalent student over five years and an increased reliance on student tuition (Center for Community College Policy Education Commission of the States, 2000).

Figure 4 shows that community colleges have the lowest spending per FTE in total education and general spending (E & G) in comparison to other types of colleges and universities while, as demonstrated by the tallest bar, they have the highest enrollment of students nationally. This figure also shows the greatest disparity in per student funding between community colleges and private research universities. It further confirms the higher cost per FTE at private bachelor's institutions of approximately \$10,000 more per student than comparative public community colleges.

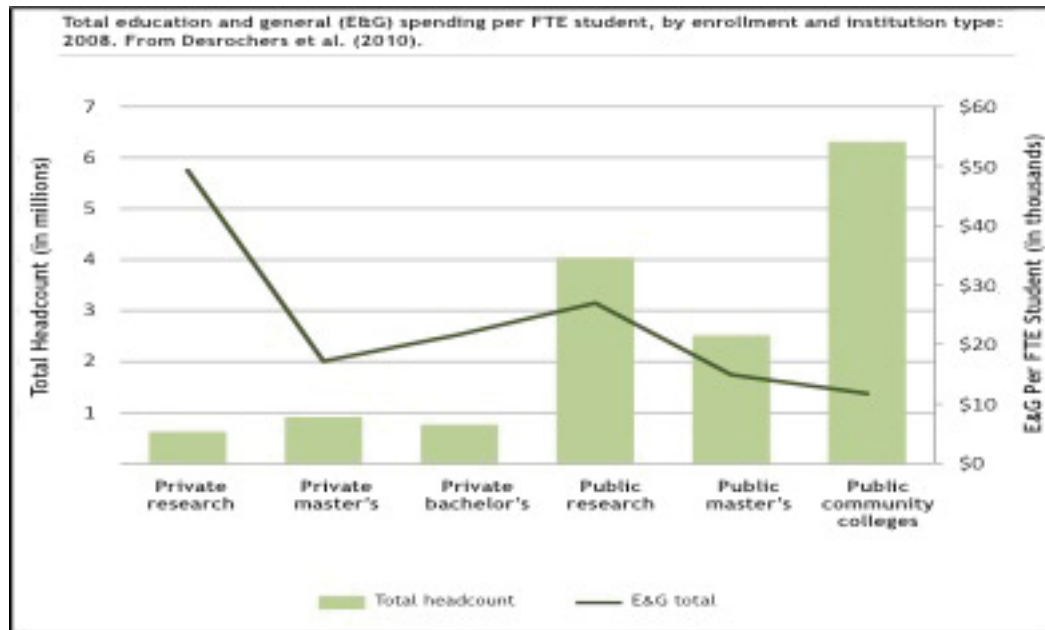


Figure 4. Total education and general spending per FTE: 2008. (Mullin, 2010)

**Local and regional funding.** At a local and regional level, college funding models typically include funding provided through local millage and state property taxes, although this model of local taxpayer support has been negatively impacted by property tax limitation efforts in California, Arizona, Colorado, Hawaii, Illinois, Oregon, and Washington (Katsinas et al., 2008). Some colleges rely on state allocation and property taxes without a local millage or levies, making funding that much more challenging. Jackson Community College in Michigan, for example, has tried 15 times throughout its history to increase its millage for community support without success.

The enormous growth that community colleges experienced particularly during 2008-2010 was fueled by the economic downturn—historically, community college enrollments rise during bad economies due to the lack of jobs and the need for retraining—and occurred at a time of widespread state and local funding cuts, placing huge strains on campuses across the country (Merisotis & Wolanin, 2008). Most recently,

since 2011, colleges and universities have seen a small increase in state and local support for colleges from the previous two years from \$87.2 billion to \$87.5 billion; however, levels of support have not met the \$88.8 billion level of 2008 (Mullin & Phillippe, 2011).

The task of scrutinizing funding—a necessary result of the combined shifting of federal, state, and local revenue sources—requires community colleges to incorporate new and widening efforts to find other avenues of income or methods to offset costs while at the same time demonstrating greater accountability. Alfred (2011) states when discussing the community college and this impact, “It is an uncharted horizon of simultaneously contradictory forces of growth and opportunity, resource decline, intensifying pressure for accountability, and changing rules of competition” (p. 105). As a result of this “uncharted horizon,” many colleges are performing a financial and programmatic review within their institutions. They are analyzing their budgets and the costs of their programs to determine if they are meeting enrollment, revenue, and graduation targets and if not, how the programs can be revitalized, eliminated, or recreated anew. This challenge for community colleges will inform the research question: *How do community college leaders transform program cost models and program review processes to create improved efficiency and/or effectiveness?*

### **Current Trends Impacting Revenues: Declining Enrollment and Shifting Demographics, Rising Tuition, and Financial Aid Changes**

With the enrollment boom of 2008-2010 fading and the economy appearing to recover, many colleges are experiencing declining enrollment, almost 1%, from fall 2010 to fall 2011 (M. Smith, 2012) as a result of multiple factors. These factors are:

1. Community college students continue to lead multifaceted lives, including working and juggling their educational pursuits, with two thirds of students attending community college on a part-time basis (AACC, 2012);
2. Rising tuition rates deter students from pursuing their education and may affect students' ability to pay for college (Romano, 2011);
3. Pell funding restrictions have limited the number of terms a student may enroll;
4. Students' income eligibility threshold has been raised, thus eliminating previously eligible students.

The decline in state, federal, and local funding, falling enrollment, and restrictive financial aid policies are factors that exacerbate the challenge of accurate, reliable, and stable revenue projections and, thus, finding efficiencies with current dollars is critical for community colleges.

Despite a period of recording-breaking enrollments in 2008-2010, a national increase of more than 21% since 2007 (Mullin & Phillipe, 2011), many community colleges are now faced with the monumental challenge of scrutinizing their funding, their budgets, and their program costs to determine both future viability and institutional sustainability.

The research confirms the need for community colleges to assess and maximize their financial resources allocated to academic programs in order to improve student outcomes under the current economic and financial conditions. By examining academic programs and their accompanying revenue and expenses, current dollars may need to be redistributed to those programs that are showing significant benefit to students and the



community. Those programs that have shown to be less effective or are no longer in demand may need to be eliminated. It is timely for institutions to examine their missions and to revitalize or discontinue programs that are not aligned and to improve efficiencies (Boggs, 2011).

### **Program Cost Models**

The program cost model is a critical element of a college's efforts to adopt sound, transparent, and effective business practices.

It will not be enough for leaders to run numbers related to growth and learner outcomes to establish that a college is doing well or poorly. They will also need to run numbers that gauge a college's ability to leverage its resources, and in doing so, enhance its capacity. (Immerwahr et al., 2008)

Alfred et al. (2009) refers to this as "stretch." Colleges that demonstrate their ability to "stretch" in ways that utilize current revenues more effectively and to reinvent themselves better to serve their stakeholders will be those that have mastered institutional effectiveness (Alfred, 2011).

For the purpose of this study, the program cost or cost-to-educate model is defined as a process of examining the revenue, fees, and associated direct costs, i.e., salaries, administrative overhead, and benefits that are attributed to a program. The process results in the development of a tool called the program cost or cost-to-educate model that illustrates the cost of programs on a scale of high cost to low cost. Enrollment and graduation rates may be included in the models.

The Lumina Foundation Report (2001) advocated for colleges and universities to dig even deeper into their financial analysis of their specific programs and retooling of their resources and potentially be rewarded through state funding for their work. Lumina encouraged higher education institutions to evaluate their programs closely (p. 17). This

directive is expressed in other literature noting that “Business models that return significant savings can be used to invest in student success while providing institutions a way of judging both their progress and efficiency” (Mullin & Phillippe, 2011). Dickeson (2010) argues for the importance of program cost studies: “Real cost-containment efforts have thus far avoided significant penetration into the sacred precincts of the academic side of the higher education enterprise” (p. 5).

While there has been extensive literature on the need to contain college costs (Altstadt, 2012; Campus Commons, 2009; Dickeson, 2010; Gonzalez, 2011; Immerwahr, Johnson, & Gasbarra, 2008; Katsinas, Tolefson, & Reamy, 2008; Merisotis & Wolanin, 2008; Sullivan, 2010; Toner, 2010), the literature to date has not provided insight into which program cost models as they exist are proving most effective in providing accurate program costs and how these are then integrated with academic program review to improve college efficiencies and effectiveness. The League for Innovation’s Leadership Abstracts reported on the program cost model development process of Central Piedmont Community College in December 2011. Lori Alexander, author of the League article (2011), asserts:

comprehending what a program costs is important to everyone from faculty and program directors to senior administrators. . . . With decreasing budgets, knowing the cost of a program helps prioritize resources during tough economic times and helps make the case for additional funding from external sources in support of high demand/high-cost programs. (p. 1)

Appalachian State University has developed a system, The Position Metric, to enable creation of workload models for academic units based on faculty salaries within a certain discipline. It informs universities on a benchmarked ratio of full-time faculty members to determine their cost effectiveness in this area; however, it is not used to

evaluate program efficiencies. While salaries comprise the majority of most college and university budgets, this model is not noted as being integrated into program review processes (Aeschleman, Burwell, & Sharp, 2011).

On a larger scale, state performance funding has been implemented and there are several reports that elucidate the efficacy of this system with limitations (Dougherty & Reddy, 2011; Shulock & Jenkins, 2011). Performance funding is a specific formula within a state to tie funding to institutional performance based on key indicators of student outcomes, including retention (Dougherty & Reddy, 2011). This system has proven to increase institutional awareness of the need for continuous improvement, increased status competition among institutions, and encouraged greater use of data in planning and decision-making (Dougherty & Reddy, 2011). The literature has not confirmed that performance funding significantly increases rates of remedial completion, retention, and graduation (Dougherty & Reddy, 2011).

With new program cost models slowly emerging based on the national demands for greater accountability and local need for sustainability, it is significant that an introduction of the new and innovative processes and products would occur to assist community colleges to reinvent not only their programs, but also their finances as part of a new business and finance model of community college success. Given the changes impacting leaders in community colleges, this study also confirms the urgency to understand the leadership skills and competencies used in the development and implementation of these models by key administrators. The identification at two community colleges of effective and integrated program cost model and program review processes that lead to institutional effectiveness and efficiencies are at the center of this

study. Stack and Leitch (2011) confirm that “Today’s institutions must operate strategically, designate resources effectively, and share a common vision across multiple academic and administrative units” (p. 18).

### **Program Review**

Program review is a “type of evaluation of an instructional, instructional support, student service, or administrative program department or unit” (Bers, 2011, p. 63). Most colleges have a form of programmatic self-evaluation, which allows an instructional unit to examine its effectiveness based on a number of criteria (Bers, 2011; White, 2007). Program review is the primary means when taken collectively with which colleges demonstrate their effectiveness in serving the needs of students and their community (Bers, 2011, p. 64). In support of program review, Bers (2011) states, “In the area of accountability, shrinking financial resources, and greater urgency for community colleges to remain flexible and responsive, program review can inform institutional leaders about what needs to be enriched, improved, maintained, downsized, and even eliminated” (p. 64).

Academic program review is not a new concept at community colleges as it is a required element of regional accreditation. Program review began in the late 1950s and early 1960s in response to public dissatisfaction with public education, the increased need for accountability as a result of federal funding, and the increased development in community colleges of vocational programs (White, 2007). From these pressures, the evaluation process of program review emerged (Barak & Brier, 1990). There has been extensive literature on its development, design, and implementation, as well as the motives that encourage its use (White, 2007).

Ideally, community colleges examine and assess their programmatic success through program review as a process and accompanying evidence of institutional effectiveness. Program review is to the micro level of a college what institutional effectiveness is at the macro level (Bers, 2011, p. 64). Community colleges are required by their accrediting bodies to provide evidence of institutional effectiveness and to clearly link the processes of budget and academic program review together. The process of program review is essential to ensure the quality and effectiveness of all programs and should be central to a college's quality assurance process (Bresciani, 2006, p. xii).

Program review refers to the evaluative process that will provide multiple data and narrative information about a program's characteristics and goals. The primary purpose of program review is to (a) encourage program effectiveness, including program relevance and curriculum currency within the discipline and/or industry standards; (b) provide a mechanism for continuous quality improvement; and (c) identify changes and needs for the program, including, but not limited to, increased staffing, supplies, or equipment.

A comprehensive program review is comprised of information that can include the program description (mission and purpose), SWOT (strengths, weaknesses, opportunities, and threats), unique program attributes (e.g., special grants, awards), resources used (program costs and revenues, partnerships, donations), organizational dependency (the linkage to other programs and services), process efficiencies (faculty load, class size, and facility use), program outcomes (degree completions, employer graduate satisfaction surveys), key issues and institutional priorities (program impact and

results aligned with college goals), and improvement (plans for change and needs for the future) (Bers, 2011).

How models are successfully embraced and championed by key college stakeholders is unclear. Bers (2011) speaks to the concern that program review can be highly political and that an authoritative level of power that is wielded can be damaging to the processes, the people, and future inclusivity and support for the process. Fear of program review and resulting decisions are concerns that should be addressed in program review. It is as Bers describes, “the elephant in the room” (p. 15), as faculty and staff can feel vulnerable by the scrutiny resulting in possible program elimination or reduction despite a self-proclaimed quality improvement perspective on the part of the college (Alfred, Shults, Jaquette, & Strickland, 2009).

Program cost models may not always be included in their totality in academic program review. Some program reviews may contain cost accountability and others may not. It was central to this research to understand how two community colleges, during the most recent economically adverse environment for community colleges, created and integrated their program cost study processes into their program review processes to improve efficiencies.

Barak and Breier (1990) state that a key value of program review is “the results of program review must be used in planning and budgeting of the institution.” Mets (1997) states, “The results of program review can guide all other decision making within the institution, particularly those that relate to setting priorities and allocating or reallocating resources in order to achieve planned change” (p. 354).

A 2009 Delta Cost Study report clarifies that states should look to the community colleges that put teaching and student success at the forefront of their missions. By using data provided in improved processes and products such as program review and program cost models, colleges can show their continued efforts to improve outcomes for students while increasing their institutional efficiency and effectiveness as part of the new business model (McClenney, 2007).

### **Accountability: A Driving Force**

As revenues are shifting dramatically, community colleges have been challenged to assess their measures of accountability. Students attend community colleges for multiple reasons, including preparing for a career, upgrading a specific skill, or transferring to a four-year institution, which makes measuring outcomes for students that are deemed successful in the eyes of stakeholders difficult. Some literature advises, as reflected in The National Center for Higher Education Management Systems Delta Cost Project publication (2009), *Rethinking Conventional Wisdom about Higher Education Finance*, against sending more students to community colleges given that students have a low degree attainment rate. While community colleges cost less, the counter argument suggests that the cost of community college degrees is higher given their lower graduation rates (Jones & Wellman, 2009). The American Enterprise Institute added to this controversial viewpoint in their April 2012 report, *Completion Matters: The High Cost of Low Community College Graduation Rates*, that states “the majority of students entering community college fail to complete their degrees, and as a result, earn lower wages throughout the course of their lives” (p. 1).

Community colleges, as well as other institutions of higher education, faced with these challenges are under increased pressure to produce college graduates, which has focused attention on their accountability and their productivity. The Lumina Foundation's work (2011), *Four Steps to Finishing First*, focused on the need to increase higher education's productivity. During their 2010 National Productivity Conference, the Lumina Foundation defined college productivity as the amount of education resources used divided by the number of degrees produced, which equaled productivity:

$$\text{Productivity} = \frac{\text{educational resources used}}{\text{degrees produced}}$$

The Lumina Foundation report (2011) urged policy makers that they should “invest in institutions that demonstrate the results of adopting good business practices.” It is through this adoption of good business practices and the documentation of resulting savings that colleges and universities can become more productive, thus increasing their accountability to their constituents and ideally enhancing their performance.

### **Stakeholders**

Multiple stakeholders, including governmental agencies, regional accrediting bodies, students, parents, and employers, are insisting that community colleges become more accountable and transparent. They are asking for evidence of outcomes that ensure that a student will receive educational value or success by attending. Two examples support this mandate for change. The Department of Education required, through the “Gainful Employment Law” that went into effect in 2010, that colleges offering short-term certificates of one year or less post the cost of the program, the number of graduates, and median debt for the program. The American Institutes for Research, working with the Lumina Foundation, is nearing an agreement with six states that will make public



program-by-program and institution-by-institution records of the starting wages of their students (Basken, 2012). There is increased demand from students and other stakeholders to utilize data to determine for themselves the efficacy and cost of programs.

As community colleges raise their tuition and fees to offset loss of other sources of revenue, students and members of the community are asking if their community college provides students with the skills, knowledge, and competencies to obtain a certificate or degree to advance in a career. The Lumina Foundation (2013) affirms that increasing the skills and knowledge of the workforce is very important for all employers and encourages partnerships in which they play a central role in increasing graduation and completion rates and that develop approaches that better align postsecondary education with current and emerging labor market needs (p. 12). Employers are also pushing community colleges to fill their skills gap by providing efficient and effective training for their workforce. Students, and in some cases their parents, driven by escalating college costs, are looking to community colleges for cost-efficient opportunities to pursue their education. While many community colleges have successful corporate and business partnerships, it is unclear from the literature if program review was the primary driver in their development and implementation.

### **Regional Accrediting Bodies**

Accountability as required by regional accrediting bodies is not new; however, given the forces that are impacting colleges and the pressures faced by increased tuition costs, accrediting bodies are also under increased scrutiny to provide an accountability framework within which colleges and universities can provide evidence of their work and their success to stakeholders in educating students.

The 2006 Spellings Report emphasized the need for accrediting bodies to change their processes in order to assure greater performance by colleges and universities. The Commission for the Future of Higher Education was charged by Secretary Spellings to develop “a comprehensive national strategy for postsecondary education that will meet the needs of America’s diverse population and also address the economic and workforce needs of the country’s future.”

With the focus on accountability from stakeholders and regional accrediting bodies to increase affordability and productivity, community colleges are pushed to examine how well they are serving students to meet national and state initiatives for increased completion rates. The literature encourages new business practices for community colleges; however, few examples of efficient and effective practices are available. It is important for colleges to publish and share their models for others to utilize and replicate in order improve their effectiveness.

### **Integration of Program Review and Program Cost for Efficiencies and Effectiveness**

As colleges begin to re-examine each dollar within their budgets and are pushed for greater accountability due to low graduation and completion rates at community colleges, it is at the programmatic level where answers may be found to provide cost efficiencies and best practices. It is there too that potential solutions to the bigger issues of student success and institutional effectiveness may be found (Alfred, 2011; McClenney, 2009). Linking program outcomes to institutional goals informs college internal and external stakeholders of how it delivers its value and how well it is achieving its mission (Bresciani, 2006, p. 82). It is important to understand program cost studies and program review processes and tools, which prove useful for both faculty and

administrators and contribute to institutional improvement and effectiveness as the literature seldom suggests methods that program costs can be integrated. Both CPCC and NMC have developed tools and processes that meet these criteria.

For this study, effectiveness is evaluated based upon the careful and methodical review of academic programs as part of the program review process and the accompanying analysis of programmatic costs, which resulted in the repurposing of budgets for newer, revised, or differentiated programs that lead to student success. Coupled with effectiveness, improvement is the organization's ability to achieve excellent performance while optimizing its resources.

### **Regional Accreditation Requirements**

The accrediting bodies of the two colleges in this study as well as the other four United States regional accrediting bodies all require evidence of institutional effectiveness, as each accrediting body is also being held responsible for the outcomes of students in higher education institutions.

Since 1987, the United States Department of Education has required regional accrediting agencies to measure the effectiveness of their institutions as related to:

- Existence of an institutional purpose appropriate for higher education;
- Determining that the institution has educational objectives consistent with its mission or purpose;
- Documentation of the achievement of students in relation to the intended educational outcomes identified;

- Determination of the extent to which institutions regularly evaluate student academic achievement and use its results for improvement of educational programs.

It is important to this case study to briefly examine the institutional effectiveness requirements related to both program review and program cost models, frequently associated with budgeting, for the two regional accrediting bodies of each of the colleges: (a) The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) for CPCC, and (b) the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools for NMC.

### **Program Review – SACSCOC**

The SACSCOC was one of the first of the six regional accrediting bodies to mandate accountability through the practice of institutional effectiveness on each college campus (Skolits & Graybeal, 2007). Since 1989, when SACSCOC established institutional effectiveness as an accreditation requirement, colleges within the SACSCOC region began to concentrate on student learning outcomes, academic program reviews, and related planning, assessment, and evaluation efforts as part of continuous quality improvement efforts.

The SACSCOC comprehensive standard 3.3.1 is the standard for institutional effectiveness and it is the most commonly cited standard for noncompliance (Head & Johnson, 2011). In 2010, 70% of institutions reviewed were found to be out of compliance with this standard during the initial phase of review, with 20% of those institutions needing to submit a monitoring report after a review of their reaffirmation materials (Head & Johnson, 2011). The standard and its subpart are as follows:

3.3.1. The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in each of the following areas: (Institutional Effectiveness)

3.3.1.1. Educational programs, to include student learning outcomes

### **Program Review – HLC/NCA**

The second accrediting body of this study, The Higher Learning Commission of The North Central Association of Colleges and Schools, of which NMC is a part, has, as of January 2013, five newly revised criteria for accreditation. This research is related to the requirements of Criterion 4 and Criterion 5 that pertain to program review and budgeting and their integration into the overall planning processes. Criterion 4 is focused on institutional effectiveness as it relates to Teaching and Learning: Evaluation and Improvement: “The institution demonstrates responsibility for the quality of its educational programs, learning environments, and support services, and it evaluates their effectiveness for student learning through processes designed to promote continuous improvement.” The subpart of Criterion 4 states:

4.A. The institution demonstrates responsibility for the quality of its educational programs.

1. The institution maintains a practice of regular program reviews.

Table 1 compares SACSCOC’s standard and HLC’s criterion related to program review as part of institutional effectiveness.

Table 1

*SACSCOC’s Standard and HLC’s Criterion Related to Program Review as Part of Institutional Effectiveness*

SACS-COC (CPCC)		NCA- HLC (NMC)	
Standard 3.3.1	Subpart	Criterion 4	Subpart
<p><b>Institutional Effectiveness:</b> The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in each of the following areas:</p>	<p><b>3.3.1.1:</b> Educational programs, to include student learning outcomes.</p>	<p><b>Institutional Effectiveness: Teaching and Learning:</b> The institution demonstrates responsibility for the quality of its educational programs, learning environments, and support services, and it evaluates their effectiveness for student learning through processes designed to promote continuous improvement.</p>	<p><b>4.A.</b> The institution demonstrates responsibility for the quality of its educational programs. <b>1.</b> The institution maintains a practice of regular program reviews.</p>

Head and Johnson (2011) assert that the standard should be considered more than just an accreditation requirement, but as a commitment to good practice on the part of the institution. They point to the standard and its call “for institutions to be systematic in trying to make programs better—programs that are already strong and those that are weak” (Head & Johnson, 2011, p. 49). What is important for colleges for the future is that the process aimed at institutional effectiveness gives them a structure in which to discuss program improvement as a result of program review.

## **Program Costs/Budgeting – SACSCOC and HLC/NCA**

Related to budgeting and its integration into institutional planning efforts, SACSCOC's Core Requirements 2.5 lists that

The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that (1) incorporate a systematic review of institutional mission, goals, and outcomes; (2) result in continuing improvement in institutional quality; and (3) demonstrate the institution is effectively accomplishing its mission. (Institutional Effectiveness).

HLC's Criterion Five—Resources, Planning, and Institutional Effectiveness—requires institutional improvement processes and support of its resources. It states: “The institution’s resources, structures, and processes are sufficient to fulfill its mission, improve the quality of its educational offerings, and respond to future challenges and opportunities. The institution plans for the future.” Criterion 5 and its subpart 5.C. state, “The institution engages in systematic and integrated planning.” Section 5.C.2 states further the requirement that “The institution links its processes for assessment of student learning, evaluation of operations, planning, and budgeting.”

SACSCOC does not specifically state, as does the HLC/NCA Criteria 5.C.2., that the budgeting process be linked to the integrated process. SACSCOC did, however, address the concern, given the financial limitations being faced by higher education, in their 2002 position statement entitled *The Impact of Budget Reductions in Higher Education*, and strongly emphasized the need for colleges to be mindful of their resources and thus their programs and services for students (SACSCOC, 2002). “Administrators, trustees and legislators have a joint responsibility for providing, safeguarding and managing the resources of institutions under their charge. Without such understanding

and commitment, our institutions of higher learning and their programs are placed in jeopardy” (SACSCOC Position Statement, 2002).

Skolits and Graybeal (2007) addressed the concern that previous studies have examined campus-wide efforts on institutional effectiveness; however, there is not a body of research to indicate how constituents at a single campus perceive their own institution’s efforts including their processes and products. While this study does not address the opinions of faculty, it does address the opinions of executive academic leadership of their understanding of the processes and products of program review and program cost models and how leadership competencies and styles utilized now and in the future affected institutional effectiveness at their campuses.

For this study, it is these two regional accreditation criteria and standards that provide the framework of accountability in institutional effectiveness for program review and program cost models at NMC and CPCC. They also provide the basis of the research question in determining the extent to which colleges are transforming themselves to improve effectiveness and efficiencies and develop a new comprehensive community college business model.

HLC states that “the institution plans for the future.” Given the need for colleges to comply with accreditation requirements, this case study will examine how two colleges are systemically engaged in institution-wide planning and how they are utilizing and reinventing their processes and their resources to “respond to future challenges and opportunities.” The American Association of Community Colleges in its April 2012 report, *Reclaiming the American Dream: Community Colleges and the Nation’s Future*,



emphasizes in its conclusion how community colleges must create new designs and to cease existing on models of “yesteryear” (AACC, 2012, p. 25).

The final element of this study will examine the use and application of leadership competencies by key administrators in the creation of the new processes to determine which competencies proved useful for their two institutions. It will be important to other leaders to understand what competencies proved valuable now and for future implementation and integration efforts as they work to sustain their institutions.

### **Community College Leadership Competencies Required for the Transformation of Program Review and Program Cost Models**

#### **Background and Context**

Literature on leadership in community colleges is plentiful (Alfred, 2012; American Association of Community Colleges [AACC], 2005; Baker & Associates, 1992; Basham & Mathur, 2010; Boggs, 2012; Campbell, Syed, & Morris, 2010; Duree & Ebbers, 2012; Eddy, 2004, 2006, 2010; Floyd, Maslin-Ostrowski, & Hrabak, 2010; Hines, 2011; McNair & Phelan, 2012; Myran et al., 2003; D. Wallin, 2010; D. L. Wallin, 2012; Wilson & Cox-Brand, 2012). With almost 1,200 community colleges in the United States representing their regions as they were created to do, it bears examination how community college leaders shape their institutions today. How, in this new economy faced with budgetary reductions from local, regional, and federal funding streams and with increased accountability from key stakeholders, do these leaders lead effectively for the community college’s future? What are the competencies that they possess that provide their institutions with the key processes that lead to successful results?

After two years of work, based on the driving force that 84% of then-current community college presidents would retire in 10 years (Martin, Samels, and Associates,

2004, as reported in McNair, Duree, & Ebbers, 2011), the American Association of Community Colleges, on April 9, 2005, unanimously approved the Competencies for Community College Leaders. The AACC Board of Directors noted:

The created framework has wide utility for both individuals and institutions. It helps emerging leaders chart their personal leadership development progress. It provides program developers with curricula guidelines. Institutionally, it informs human resource departments with direction for staff recruitment, hiring, rewards, and professional development. (AACC, 2005, p. 2)

Since their publication, the question arose whether these competencies are relevant to presidents and key academic leaders given the dynamic nature of community college leadership, the pending retirements, and the complex set of skills required to lead in today's world (Alfred, 2012; Boggs, 2012; Eddy, 2010, 2012; McNair, Duree, & Ebbers, 2011; Wilson & Cox-Brand, 2012). Recently, AACC (April, 2012) confirmed this question in their report *Reclaiming the American Dream: Community Colleges and the Nation's Future* and called for increased committed and strategic leadership that included collaboration among internal and external entities, calling these specific skills critical (p. 17). AACC planned to release revisions to the 2005 competencies in April 2013. The AACC hoped that administrators and emerging leaders would use the framework to gauge their own development and assess areas of strength and needed areas of improvement. The AACC's competencies framework provides college leaders with the overlapping and interactive skills, knowledge, and abilities that are deemed essential for effective community college leadership.

The six competencies are listed and defined below:

1. Organizational Strategy

An effective community college leader strategically improves the quality of the institution, protects the long-term health of the organization, promotes the success of all students, and sustains the community college mission, based on knowledge of the organization, its environment, and future trends.

2. Resource Management

An effective community college leader equitably and ethically sustains people, processes, and information as well as physical and financial assets to fulfill the mission, vision, and goals of the community college.

3. Communication

An effective community college leader uses clear listening, speaking, and writing skills to engage in honest, open dialogue at all levels of the college and its surrounding community, to promote the success of all students, and to sustain the community college mission.

4. Collaboration

An effective community college leader develops and maintains responsive, cooperative, mutually beneficial, and ethical internal and external relationships that nurture diversity, promote the success of all students, and sustain the community college mission.

5. Community College Advocacy

An effective community college leader understands, commits to, and advocates for the mission, vision, and goals of the community college.

## 6. Professionalism

An effective community college leader works ethically to set high standards for self and others, continuously improve self and surroundings, demonstrate accountability to and for the institution, and ensure the long-term viability of the college and community.

### **Competencies and Their Importance to Academic Leadership**

Several dissertation studies have been undertaken to determine the application of the AACC competencies to current leaders in community colleges since their release (Duree, 2007; Hassan, 2008; Trettel, 2011). Duree (2007) surveyed 415 current community college presidents and found that overall current community college presidents rated themselves prepared or well prepared in the AACC's Competencies for Community College Leaders. He found that current community college leaders were less likely to be prepared in the skill sets embedded in the Organizational Strategy and Resource Management competencies. Hassan (2008) supported the value of the six AACC competencies. Specifically, there was consensus among New York and Florida community college presidents and trustee board chairpersons that all six competencies identified by AACC are "very" or "extremely" important for the success of community college leaders.

McNair, Duree, and Ebbers (2011) found that community college presidents, when asked what they would have done differently to prepare for their presidency, stated they would have had greater preparation in the competencies of Resource Management and Collaboration. This has resulted in community college presidents having to adopt management behaviors found in the business sector, with "economic goals dominating

institutional strategies and actions” (McNair et al., 2011). Given the recent financial challenges faced by community colleges, this identified need supports how important budgeting and fundraising skills are for college leaders and how they critically impact their leadership. Eddy (2010) suggests that elements be revised or emphasized given the dynamic nature of community colleges to provide a continuum of skills and competencies rather than “a mere list of items to learn and master” (pp. 101-102).

### **Future Emphasis on Certain Competencies**

From the studies on the AACC competencies, the research suggests that to drive change at community colleges for the future, while the current competencies are important, current and future leaders may need additional preparation and emphasis in the domains of Resource Management, Collaboration, and Organizational Strategy (Duree, 2007; McNair et al., 2011; Trettel, 2011). Competency in program review and program cost processes align with the areas of Resource Management as well as Organizational Strategy, thus providing current and future leaders with sound institutional and programmatic information that informs college goals and drives institutional change. The American Council on Education (ACE) Report (2011), *Presidential Leadership in an Age of Transition: Dynamic Responses for a Turbulent Time*, supports these findings and notes that long-standing presidents spent considerable time on fundraising, accountability/assessment, and budget/financial management. New presidents reported being least prepared in some of the same areas including fundraising, entrepreneurial ventures, and budgeting (Eckel & Hartley, 2011, p. 7). Eddy (2010) confirms that this competency addresses “the critical need for community college leaders to seek alternative funding sources, given the continued decrease in state funding for the institution” (p. 94).

## **Community College Leaders – President and Key Academic Administrators**

It is the president who is viewed as the leader of the community college and thus is ultimately responsible for college-wide initiatives for change (Amey, 2006; Colleges, 2005; Eckel & Hartley, 2011; Eddy, 2004, 2006, 2010; Hines, 2011; Jaschik, 2011; Kotter, 2008; D. Wallin, 2010). The president is responsible to a Board of Trustees to enact the mission, vision, and values of an institution while simultaneously responding to external community needs. It is the “brand” or the identity of the president that can set or create a culture of change within an institution and is central to creating, supporting, and implementing initiatives. Collins (2005) endorses the notion of brand since it is the “tangible results and emotional share of heart” (p. 25) that lead stakeholders to support a leader and thus the institution.

Floyd, Maslin-Ostrowski, and Hrabak (2010) state that it is the ability of the president to be able to “direct and redirect the organization” which challenges staff and faculty to reinvent their traditional values and beliefs as well as change the way of doing things (p. 67). They also suggest that it is the wise leader who recognizes the deep concern of holding onto an old business model and the negative effect it will have on a community college.

It is the leadership qualities of the president and the key academic administrators that will make for more inclusive, participatory, and supportive processes in this new economy. This study focused on the key administrators that support the president. It was their ability to develop and implement program review and program costs models to transform their colleges given the economically altered accountability climate facing community colleges today that was central to this study. Zook and Allen (2011)

emphasized this need as part of the “repeatable business model.” If colleges, not unlike businesses, are to reinvent themselves with improved outcomes and processes, they too will need to

turn the sources of differentiation into routines, behaviors, and activity that everyone in the organization can understand and follow so that when a company sets out on a particular growth path, it knows how to maintain the differentiation that led to its initial success. (p. 110)

Given the need for succession planning within institutions, there was little research to suggest that key community college administrators below the presidential level have used the AACC competencies as they examine their critical and influential work. This is despite the AACC endorsement that “promotes the development of community college leaders at all levels.” If administrators are going to lead their colleges in their roles or possibly succeed into a future presidency, it will be vital to determine which skills have value to their roles now and for the future.

The AACC competencies served as the framework in this study to examine which of these competencies proved useful by key administrators at two community colleges in their roles as they proposed and implemented new program cost and program review models. This framework is supported by two guiding principles: leadership is learned and is a lifelong developmental process (AACC, 2005). It also examined which skills key administrators felt would be useful for the future to drive institutional change in their roles and their organizations.

Researchers also consistently noted the emphasis on the uniqueness of community colleges and the need for leaders to have a deep understanding of their context and their college’s individual culture to be successful and effective in transforming their institutions (Baker, 2003; Baker & Associates, 1992; Eddy, 2010, 2012; Keup, Walker,

Astin, & Lindholm, 2001). Eckel and Hartley (2011) confirm that “Leaders must be ‘good fits’ with the institution they seek to lead” (p. 37). The successful leaders are those that are sensitive to the legacy of their institution while simultaneously pursuing new ways to move forward for a positive future. The prediction is, without this compatibility, leaders will face a Sisyphean challenge (Eddy, 2010, p. 111).

### **Leadership Theories**

If leadership can be learned as espoused by transformational leadership theorists and supported by AACCC, then it would suggest, as Eddy (2005) has indicated, that leadership is developed through stages of cognitive development that occur over a period of time and a wide range of experiences (p. 70). Eckel and Hartley (2011) state that the “the future of higher education is intimately linked to the capabilities of its leaders.” The authors speak of the “transformational tasks” that confront leaders today due to increased pressure for graduation and completion rates and the “rethinking of core practices to increase productivity” (p. iii).

The literature does not indicate extensively which leadership styles may prove useful to the development of program review and program cost models. Barak and Breier (1990) caution chief academic officers against using the program review process as a means to escape political pressure and state that the “political environment is so pervasive that one ought to expect its influence to be felt every step of the way” (p. 102). Bresciani (2006) also strongly suggests that a culture of trust and integrity must be created for institutions to benefit from the “purposeful reflection brought about by program review” (p. 144). This study examined which other leadership approaches were



influential in the successful development and implementation of program review and program cost models.

The following is a brief overview of several leadership theories and approaches as they relate to the need for changing institutional practices relevant to this study:

- Situational Leadership
- Contextual/Cultural Leadership
- Transformational Leadership
- Collaborative Leadership

**Situational leadership.** With constant changes and new and unknown demands, leaders must be able to adjust and adapt their leadership approach and knowledge to address the needs of the present. Paul Hersey and Ken Blanchard developed the concept of situational leadership in 1969, as the name implies, in support of the concept that leadership should be examined in various circumstances or situations.

Yukl (2008) emphasizes the need for flexible and adaptive leadership when there is a substantial change in situation and the leadership behaviors that warrant it. College leaders must be adept at adapting their leadership styles to the situation and to the people with whom they interact with in the situation. Yukl confirms that systems thinking, knowing how parts of an organization are interconnected and interdependent, is useful in situational leadership as parts of an organization may change and affect another; thus, leaders must be able to anticipate and comprehend how external forces may impact the institution (p. 4). Situational leadership will be important for academic leaders as they examine their decisions as a result of program review and how they adapt to the needs of the college.

**Contextual/Cultural leadership.** “Leadership and culture are conceptually intertwined” (Schein, 2004, p. 11). Baker and Associates (1992) recognized this interdependence and stressed that community college leaders should possess a solid understanding of their college’s culture and be able to manage symbolic meaning at multiple levels for multiple stakeholders (p. 9). As a result of identifying the complex nature of community college leadership, it is suggested that a leader who is culturally cognizant of his institution will prove more effective as a leader. This study will seek to determine if important cultural/contextual leadership impacts program review and program cost model processes.

Eddy (2010) defines cultural competence based on Rhoads and Tierney (1992) as “the ability to understand an organization’s culture—what is valued, how traditions influence operations, and how symbolism is used to reinforce actions.” It is the emphasis on “contextual needs” that include the specific culture, history, and challenges of a particular college (p. 2). Contextual competence is developed from an individual’s past experiences and emerges from foundational leadership schema (Weick, 1995). Leaders learn to lead based on their previous experiences and on what has worked well in the past combined with their individual preferences (Eddy, 2010). Contextual competency embraces the understanding of culture as it is imperative that leaders understand how their campuses operate holistically and thus how the leaders can frame messages as part of the collaborative organizational strategy (Eddy, 2010). Communication and the framing of messages will be examined in this study to determine what strategies proved effective.

The effectiveness of college leaders is vital based on the interacting variables and combination of factors that include the leader, staff, the situation or context, and the culture of an organization (Eddy, 2010; Hassan, 2008; Yukl, 2001). This study will determine how the culture of each college impacts program review and program cost models.

**Transformational leadership.** Transformational leadership changes and transforms followers (Wallin, 2010). The concept of change leadership intersects with transformational leadership as Wallin (2010) suggests that change leadership is deeper and broader and fitting for today's community college complexities.

Wallin (2010) lists four components of change or transformational leadership: (1) Anticipates—the leader is visionary and forwarding thinking, (2) Analyzes—the leader is constantly scanning the internal and external environment to engage in data driven and strategic decision making, (3) Act—leaders and their key administrators are accountable and to do what is required, and (4) Affirm—leaders need to instill trust in their followers if they hope to engage and sustain meaningful change (p. 9).

Transformational leaders “promote fundamental change in the organization, helping the organization adjust to the varying needs of today's rapidly changing society” (Roueche, Baker, & Rose, 1989, p. 35). Keup, Walker, Astin, and Lindholm (2001) confirm that the concept of organizational culture becomes particularly clear as we operationalize institutional transformation.

Transformational leadership should or is expected to lead to the transformation of colleges. McClenney, McClenney, and Peterson (2007) assert, “Colleges must pursue

efforts aimed at transformational change at the heart of the institution, not boutique programs on the institutional margins” (p. 27).

**Collaborative leadership.** Rosabeth Moss Kanter (1994), in her *Harvard Business Journal* article “Collaborative Advantage,” talks about leaders who recognize that there are critical business relationships “that cannot be controlled by formal systems but require [a] a dense web of interpersonal connections” and thus defined collaborative leadership. Eddy (2005) suggests that for community colleges to enhance team and individual participation, leaders must adopt practices that emphasize collaborative or team decision-making. Kouzes and Posner (2003) identify key skills and behaviors of collaborative leaders, which are creating a shared vision, empowering others to act, and encouraging everyone to take a role in leadership.

Eddy (2010) speaks to the need of leaders’ ability to “frame meaning,” which is the ability of a leader to highlight aspects of a given situation that they would like the campus to focus on and to link communication to organizational strategy, collaboration, and advocacy. By doing this, leaders can create support and collaboration for the important work of their institution.

### **Summary**

Funding for community colleges has been dramatically altered, resulting in colleges having to reassign, reduce, and reinvent their resources. Coupled with the decline in funding is the mounting pressure of increased accountability, resulting in greater scrutiny of institutional effectiveness processes that include program review and program costs models. Accrediting bodies are being pressured as well, given the public outcry of the high cost of college tuition and being driven toward achieving improved

performance from educational institutions. In the process, regional accrediting bodies are asking colleges to provide evidence of their effectiveness through the linkages of program review and budgeting to strategic planning, among other factors. Two colleges for this study, CPCC and NMC, showed promise of effective practices in program review and program cost models that may inform other institutions' efforts to improve processes and to integrate these practices into their institutional effectiveness efforts.

To drive effective change at institutions for improved processes in program review and program cost models, community college leaders below the president will need to utilize competencies as defined by the AACCC (2005) and refined by increased expectations. Research indicates that the competencies are for the most part still relevant; however, future community college leaders, including others in key academic positions, will need additional emphasis on Resource Management, Organizational Strategy, and Collaboration. These competencies, as well as other leadership approaches—situational, collaborative, transformational, and contextual—are important to transform institutions toward a new business and finance model that enables them to meet the needs of tomorrow's students and stakeholders.

## CHAPTER 3

### METHODOLOGY

By examining the program cost study and program review models at Central Piedmont Community College (CPCC) and Northwestern Michigan College (NMC), this research elucidated successful practices and processes that have created sustainable program business models, which are integrated into program review. In addition, using the AACC's Competencies for Community College Leaders, key academic administrators at CPCC and NMC were surveyed to determine which competencies have proved useful in the development and implementation of the models and processes and the degree of integration into each of the college's institutional effectiveness efforts.

#### **Program Cost Model**

The program cost model was the first element of the research. The term used to define the programmatic cost study process is called a *program cost study*, a term implemented by CPCC (Alexander, 2011). NMC's model is called a *cost-to-educate model*, which is similar to CPCC's model; however, it does not contain data on enrollment and graduation rates. The purpose of program cost study, called a *return-on-investment study* by Alexander (2011), provided academic administration with the following seven areas of information with which to make future decisions:

1. To compare costs across disciplines

2. To understand the impact of offering additional sections of specific courses
3. To manage enrollment growth
4. To prioritize allocated budget resources
5. To make the case for additional money from external sources
6. To help evaluate the performance of programs, including incorporating the study into the program review process
7. To determine what objective to assign each program or cluster of programs and what support will be needed (p. 3).

It is items 1, 4, 6, and 7 that were of interest to this research. Item 5 informed the research to determine the impact of external funding sources on sustainable program cost models for academic programs.

### **Program Review**

Program review, frequently called academic program review to differentiate between academic programs and student support and financial service program review, focuses on programs at the academic unit or departmental level (Bers, 2011). It is one element of institutional effectiveness on which this study was based. Student support services and financial services programs, both critical components of any community college, were not examined and are beyond the scope of this study. Program review is a requirement of both the Higher Learning Commission (Revised Criteria for Accreditation 2013 – Criterion 4.A.1 – Teaching and Learning: Evaluation and Improvement) that accredits NMC, and the Southern Association of Colleges and Schools (Standard 3.3.1. & 3.4.1 – Institutional Effectiveness) that accredits Central Piedmont Community College. It is the program review process that was the second element of this research.

## **Integration with Institutional Effectiveness**

Developing and utilizing a program cost study in today's financially challenged community college culture in conjunction with program review is vital for program development and revitalization. The integrated processes associated with program cost models and program reviews provide core elements of academic institutional effectiveness. This was the third focal element of this study.

The initial review of the literature describes the three elements of institutional effectiveness as separate parts or in various combinations: program review, budgeting, and strategic planning. This study focused on program review and budgeting, which includes program cost studies. However, the literature did not provide either an analysis or a synthesis of the specific combined processes of program review and program cost studies, which resulted in an integrated outcome. This integration is important to community college accrediting bodies as they look to provide evidence of these defined processes, which show responsive and flexible models created through shared governance. The Higher Learning Commission, the accrediting body for NMC, states in Criterion 5.C.2 – Resources, Planning and Institutional Effectiveness, “The institution links its processes for assessment of student learning, evaluation of operations, planning, and budgeting.” The Southern Association of Schools and Colleges, the accrediting body for CPCC, defines the Core Requirement 2.5, “The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that (1) incorporate a systematic review of institutional mission, goals, and outcomes; (2) result in continuing improvement in institutional quality; and (3) demonstrate the institution is effectively accomplishing its mission.”



## **Leadership Competencies**

The fourth and final element of this study examined the leadership competencies that positively impacted the successful development and integration of the program cost models with academic program review. Using the AACCC Leadership Competencies (2005) as a framework, this study determined the utilization and prioritization by key college personnel of the six AACCC Leadership Competencies—Resource Management, Organizational Strategy, Communication, Collaboration, Community College Advocacy, and Professionalism—in the program cost development and program review processes. These findings identify and inform other community college leaders as to which leadership skill proved most effective when making vital and potentially difficult decisions, for developing program cost studies with program review to and improve effectiveness during this challenging period for community colleges.

## **Rationale for Case Study Method**

Qualitative research provides the opportunity for depth and a rich level of detail that enabled the researcher to produce data to address the research questions in this study. “The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon” (Alfred et al., 2009). The research design, data collection, and methods utilized for this study were informed by Merriam (2009), Patton (1987), and Yin (2008, 2009).

A case study design is appropriate because the researcher seeks to examine the “real life” application of the processes of program cost study development with academic program review and the utilization of leadership competencies in doing so effectively. Yin (2009) clarifies that “a case study is an empirical inquiry that investigates a

contemporary phenomenon within its real-life context, especially when boundaries between phenomenon and context are not clearly evident (p. 18). The case study is “an in-depth description and analysis of a bounded system” (Merriam, 2009, p. 40). This method also provides the researcher with the opportunity to create an inductive analysis of leadership competencies, which looks for unique institutional characteristics that make each setting a case unto itself (Patton, 1987).

Each college selected in this study represented a “bounded system,” a single entity, which is contained. Through the unit of analysis, the college, the researcher probed into what Merriam (2009) describes as the “heart” of the study. It is the unit of analysis, the college, which encircles the subject of the research on the integration of program review and program cost models. Two cases, CPCC in North Carolina and NMC in Michigan, were chosen with the goal of producing results through the cross-case analysis, which provided both broad and robust findings. Merriam confirms that the “more cases included in a study, and the greater the variation across the cases, the more compelling an interpretation is likely to be” (p. 49).

Yin (2009) states that two cases would be the simplest of multiple-case design given that they are “believed to be literal replications, such as a set of cases with exemplary outcomes in relation to some evaluation questions, such as ‘how and why a particular intervention has been implemented smoothly.’” It is by this premise that Yin suggests that the “selection of the cases requires prior knowledge of the outcomes, with the multiple-case inquiry focusing on how and why the exemplary outcomes might have occurred and hoping for literal (or direct) replications of these conditions from case to case.”

This study used a qualitative design to investigate in detail and identify clearly the phenomena that were found to be effective in integrating academic program review processes with program cost models within two community colleges. Merriam (2009) states that the focus of qualitative research is on process, understanding, and meaning. It is the comprehension of “how people make sense of their lives, delineate the process (rather than the outcome or product) of meaning making, and describe how people interpret what they experience” (p. 14).

The framework for the study of leadership skills is the AACC Leadership Competencies (2005). The case study was enhanced by using a combined quantitative and qualitative method, a descriptive nonexperimental survey research design, to gather information, a purposive sample, from key academic administrators at each college on their leadership competencies. It also examined which competencies key administrators utilized and how they served to benefit each institution’s ability to integrate the processes effectively into their organization and their culture. Yukl (2006) stated that survey research with questionnaires is a frequently used method to study leadership. Hassan (2008) added that surveys can be used to explore relationships among variables or used to explain relationships. It is the latter that benefited this case study in determining how the relationship of leadership competencies impacted the development and integration of program cost studies and program review into the college’s institutional effectiveness efforts.

In order to increase future utilization of this study, given the challenges facing community colleges today to examine and reduce costs and improve accountability, three strategies were used. First, detailed descriptive records of practices and processes utilized

by the case study colleges will be examined. Erickson (1986, as cited in Merriam, 2009, p. 225) states it is the “concrete universals” to be sought that bring deeper value through “studying a case in great detail and then comparing it with other cases studied in equally great detail, not the ‘abstract universals,’ arrived at by statistical generalizations.”

Second, the design of the study is a multi-site design to enhance the likelihood of identifying varying and diverse practices. Third, the findings from the study were generalized to theory from the literature review using “analytical generalization” (Yin, 2003).

In previous research, case study research has been used to describe phenomena related to institutional effectiveness. For example, Malone (2009) used a case study methodology to investigate institutional effectiveness assessment in 12 institutions accredited by the Southern Associate of Colleges and Schools (SACS). White (2003) used a case study design to describe, compare, and contrast how two California community colleges connect institutional planning and decision-making processes with program review. In a similar vein, a multi-site case study design is appropriate because the intent of the researcher is to determine how two community colleges integrate and connect their academic program review processes with program cost models.

The researcher expected as a result of this study to delineate the principles, processes, and products utilized that lead to effective integration of academic program review and budget cost models. It was also anticipated that key competencies from among the six AACC Leadership Competencies were identified by the case study participants as the competencies of the greatest use for successful integration. The results served to inform other institutions of best practices used to meet and manage the financial

realities of reduced funding and compliance requirements with regional accreditation bodies by transformation of their budget models and program review processes.

The six research questions that were formulated to guide this study are categorized in three parts—one general question followed by five specific questions—related to the four areas of the study:

*How do community college leaders transform program cost models and program review processes to create improved efficiency and/or effectiveness?*

Five additional research subquestions that informed this larger overall question are:

A. Program Cost Models and Program Review

1. What are the new community college program cost models that have been developed to create efficiencies or promote effectiveness?
2. What were the stated purposes of the program cost review processes?
3. What are the critical components that led to the successful integration of academic program review processes into the new program cost model for institutional effectiveness?

B. Leadership Competencies:

4. Utilizing the current AACC competencies as a framework, what leadership competencies led to a successfully integrated process?
5. What additional competencies or approaches were evidenced in successful transformations?

## **Data Collection**

### **Phase One**

The research design for this study was organized in two phases. Phase One is based on the case study design developed by White (2007), which entailed selection of the colleges for the study. The criteria for the selection of the two colleges are: (a) one institution is from a decentralized state system and other is from a centralized state system in order to compare and contrast state system differences in administration and state funding allocations; (b) the colleges demonstrated evidence of the creation of new program cost models and/or academic program review processes and their integration, and (c) each college has a key leader in charge of the integrated planning process.

Through email and personal communications with several deans of the 28 Michigan community colleges of the Michigan Occupational Deans Administrative Council (MODAC), the researcher asked for their recommendation of which college(s) had developed effective models in program review. MODAC serves as an organizing body for occupational deans in Michigan, a decentralized community college system state. NMC was chosen due to the development of its academic program review model, which is considered to be a leader in the state in this process. CPCC, the other college selected for this study, was chosen because of its development of a new program cost model that has demonstrated its ability to create program revitalization. CPCC is part of a centralized system, the North Carolina Community College System. The cost-to-educate model from NMC and the program review process at CPCC were also examined as central components to each college's holistic efforts of program review and program cost integration.

During this phase, a thorough review of each of the two college's websites was implemented to examine documentation, communications, and other evidence of decision-making that inform the integration of program review and program cost models at both institutions.

## **Phase Two**

Once the colleges were selected and a review of website resources occurred, an introductory letter was sent to the Executive Director or Vice President of Institutional Effectiveness, at each college inviting the college's participation in the research. This began Phase Two. Information on the study, including an overview of the study, the general and research questions, and a participation consent form, was sent to the key contact person at each college.

CPCC required IRB approval. NMC required leadership approval. Institutional approval was sought in October and received by both institutions to begin the study in November.

**Interviews.** Once the approval to begin the study was received, an email message was sent to each participant, which outlined the purpose of the study and the research questions. A request to interview each administrator was included in the email. A copy of the researcher's IRB approval was sent to each administrator upon confirmation of an interview appointment along with a consent form (Appendix E). The leadership competency survey was also attached with instructions asking each participant to complete the survey before the interview.

Interviews were held over two days on two separate visits to NMC and were held on one visit over several days at CPCC. The participants that were interviewed included

key academic administrators directly responsible for the evaluation, planning, budgeting, and decision-making processes. Interviews included (a) vice presidents and directors of academic divisions, (b) deans, (c) chief financial officers, (d) institutional researchers and planners, (e) a director of strategic planning, and (f) provosts or chief academic officers.

Sixty-minute semistructured interviews using open-ended questions were conducted with a total of 13 administrators, 5 from NMC and 8 from CPCC. Semistructured interviews allowed for specific questions to be asked of all participants. The largest portion of the interview provided the interviewer with greater flexibility to respond to the uniqueness of each institution and its models and to engage in discussion and new ideas related to the topic (Merriam, 2009).

The following open-ended questions were used to guide the semistructured interview process during Phase Two:

#### *A. History*

*General Question:* What is the history of program review and program cost models at your college?

*Follow-up Questions:*

1. What were the influences that created your program cost model?
2. What were the influences that created your academic program review model?
3. How many years has the program review process been in effect?
4. How many years has the program cost model been in effect?
5. What key leadership changes have occurred during this time, if any? e.g., president, dean of institutional research, provost
6. Who has been responsible for program review? In what ways?



7. How are faculty involved in program review?
8. Who is responsible for the creation and implementation of program cost models?
9. How are faculty involved in the creation and implementation of program cost models?
10. What was the process for program review previously and what changes resulted from your model? How did you measure effectiveness previously?

### *B. Context*

*General Question:* What current model of program review and program cost model is being utilized at your college?

*Follow-up Questions:*

1. What is the purpose of program review at your college?
2. Has it changed recently (i.e., during the last 3 years)?
3. What drove the change(s) in the program review model?
4. Who drove the change(s)?
5. What were the leadership implications of this change? What proved effective? What proved ineffective?

### *C. Implications and Changes*

*General Question:* Has program review been linked to other processes at your college? If so, which ones? Budget? Strategic Planning? Institutional Effectiveness? If so, how?

*Follow-up Questions:*

1. What led to the linkages? Accreditation standards?

2. How many years have they been linked?
3. What were the internal and external forces driving this linkage?
4. If they are not linked, is this the goal? Yes or No? What do you think needs to occur to create these linkages? What are the barriers?
5. Do you believe that the models you have created are effective? Why and how?
6. What made them effective? What other processes or people assisted these changes?
7. What were the competencies (skills and knowledge) that led to integration?
8. What has changed as a result of the implementation of these new models?

#### *D. Areas of Improvement*

*General Question:* What changes do you foresee in your program review and program cost models?

*Follow-up Questions:*

1. How do you assess the usefulness or effectiveness of the models?
2. What stakeholders contribute their feedback? How and when?
3. What skills do you believe are needed to implement changes or improvements?

#### *E. Projections and Impact*

*General Question:* What impact has program review had on your college in the last 3–5 years? Why?

*Follow-up Questions:*

1. What changes do you think will be made to the process, if any, in the near future?

2. What do you foresee will impact your processes in the future?
3. What leadership skills do you think will be necessary to drive changes for the future at your college?

Individual interviews were chosen over focus groups as the method of interviewing due to the ability to create greater rapport with the participants in a one-on-one setting, to provide better sampling, to ease and reduce scheduling concerns, and to provide deeper insights due to the more focused nature of the interview.

Interviews were held in the offices of each participant. An explanation of the interview process and protocol was reviewed with each person at the start of each interview. All participants were interviewed separately, with the exception of one interview that involved two participants due to restrictions in scheduling. Each participant interview was taped using a Sony digital recorder. The researcher also took notes as additional back-up to each recording. Each recording was then transcribed and printed by the researcher in order to code each transcript.

**Survey instrument.** A quantitative survey on the six AACC Leadership Competencies including 33 illustrations was given to each of the participants. Respondents were asked to rate their opinions on the current use and future use of each of the six competencies at their colleges using a Likert-type scale ranging for their responses from 1 – Not Important to 5 – Extremely Important. A pilot of the survey instrument was administered to two colleagues in charge of program review at the college of the researcher prior to the distribution in this study. The leadership survey of 33 questions was sent electronically to each participant prior to each interview. Data from the surveys were analyzed using SPSS to determine which competencies proved useful at both

colleges in key administrators' practice to date and their relative importance for future practice.

**Documents.** Information on their program cost models and academic program review processes from the colleges, including websites, were analyzed, organized into categories, and summarized, i.e., overview of the integrated process, budget models used, data collection, and schedules. Documents that were collected included (a) strategic plans, (b) budget plans, (c) budget models, (d) course cost models, (e) program and curriculum review reports and processes, (f) master plans including educational plans, (g) accreditation reports and responses from each college, and (h) minutes from strategic planning meetings and planning and budget meetings.

**Onsite observations.** Each college was visited at least once. These visits allowed for a greater understanding and comprehension of the college, the participants, the environment, and the culture of the institution. Each visit was scheduled to allow for attendance at meetings that informed the research question. The researcher attended a leadership group meeting and a Board of Trustees meeting at NMC. While at CPCC, the researcher attended an accreditation preparation meeting.

**Institutional Review Board.** To protect all human subjects in this study for their safety, confidentiality, privacy, and well-being, the researcher made application for approval to the Institutional Review Board (IRB) of Ferris State University in September 2012. As part of the application process, an informed consent form, the research procedure, and supporting documents including email recruitment and leadership survey questions were submitted to the IRB.

## **Data Analysis**

Documents and data from each college, including electronic media, were analyzed and organized based on the conceptual framework that was informed by the literature that are present in the development of program cost models and academic program review processes and their successful integration. Merriam (1998, as cited in Bloomberg & Volpe, 2012) states that “the conceptual framework affects every aspect of study, from determining how to frame the problem and purpose to how the data are collected” (p. 87). The research categorized how the integrated processes occurred, identified the key decision makers, delineated information and data migration and communication patterns at the college, and documented the results of these processes. During Phase One, information and documents from each of the college websites were recorded in an electronic document summary (Appendix N) to archive themes and ideas expressed in the documents that described program cost models and program review as well as leadership competencies. Notes and questions were compiled. Specific administrators were asked follow-up questions by email in February and March, as needed, based on the documents and website analysis.

During Phase Two, transcripts of one-on-one interviews were coded based on the coding schema (Appendix F) developed from the conceptual framework from the literature. The coding schema had been reviewed and analyzed previously by another colleague prior to implementation and documented in a coding schema development chart (Bloomberg & Volpe, 2012). The researcher then coded the statements that provided evidence of efficiencies and effectiveness of the program review and program cost models at each college. The researcher also coded the transcripts for the leadership

competencies that were utilized in the development and implementation of each college's models. Themes from the interviews with the various participant groups were identified, coded, and compared with each other to determine the presence of consistent and recurring themes.

The leadership survey results were analyzed using descriptive statistics (mean, mode, median, standard deviation, and deviation scores). Descriptive statistics is a method of presenting quantitative data in a more manageable form. It reduces the data from "unmanageable details to manageable summaries" (Ruben & Babbie, 1997, p. 466). Tables were created to compare the descriptive statistics of each college. Tables were also created to show the competency illustration ratings by each college for current use and future use.

Each college's data were organized in a cross-case analysis from which the researcher organized the coded data into themes and categories based on the coding schema. This allowed for sorting and analysis, which was then connected to relevant literature. Data were triangulated to determine similarities and differences by observations, interviews transcripts, and with institutional documents and information. Using the data, the researcher synthesized the multi-site case study into a model that defined the key processes, products, and leadership competencies that lead to successful integration of program cost models and academic program review at two community colleges.

### **Trustworthiness**

**Validity.** "Validity is a goal rather than a product; it is never something that can be proven or taken for granted" (Merriam, 2009, p. 214). "The qualitative study provides

the reader with a depiction in enough detail to show that the author's conclusion 'makes sense'" (Firestone, as cited in Merriam, 2009, p. 210). It is the researcher's responsibility to interpret the data. To establish trustworthiness and authenticity, the case study design used multiple methods interviews and surveys and multiple sources to triangulate the data. Miles and Huberman (1994, as cited in Merriam, 2009) state that by examining similar and contrasting cases, we can "strengthen the precision, the validity, and the stability of the findings" (p. 29).

Validity in qualitative methods hinges to a great extent on the skill, competence, and rigor of the evaluator as the observer is the instrument (White, 2007). The researcher had worked previously with Action Research in Washington State, conducting focus groups and analyzing information for formative and summative evaluation projects in the field of social sciences. She holds a Master of Social Work degree and had conducted group and one-on-one interviews in multiple settings in both academic and human services organizations.

**Reliability.** Reliability means the extent to which the research can be replicated (Patton, 1987). This study utilized the case study model similar to one developed by White (2007) in her case study on institutional effectiveness of two California community colleges. Merriam (2009) states that replication of a qualitative study will not draw the same conclusions; however, this does not discredit the findings of either study. It is the consistency of the findings with the data collected that is important and thus viewed as dependable (Merriam, 2009).

The quantitative survey used a model developed by Hassan (2008) in his analysis of the AACC Leadership Competencies with presidents and trustee board chairpersons of

New York and Florida community colleges. Hassan (2008) suggested areas of future research that are central to this study “to further identify which leader behaviors are important at each level of leadership stratification” (p. 86). This study included this element in the context of program cost model and program review development and implementation with key college administrators.

**External validity.** Generalizability has challenged qualitative researchers for a long time (Merriam, 2009). It is suggested by Lincoln and Guba (1985) that it is transferability that matters. Transferability suggests that “the burden of proof lies less with the original investigator than with the person seeking to make an application elsewhere.” (p. 224).

### **Summary**

This chapter outlined the research methodology for this study that is centered on two colleges, NMC and CPCC, as part of a mixed methods case study. Rationale was provided for the study based on the work of Merriam (2009), Patton (1987), and Yin (2008, 2009). The two phases of the study were described as well as the methods that were utilized, which included interviews, document analysis, survey instrument, and observation. A description of the data analysis was included as well as a discussion on the study’s trustworthiness that included the components of validity and reliability.



## **CHAPTER 4**

### **RESULTS**

The purpose of this mixed-use case study was based on five specific objectives: (a) to learn from two innovative community colleges how new program cost and program review models have been developed to improve efficiencies and effectiveness at each college, (b) to understand the utilization of new program cost models at each college, (c) to determine which factors proved most effective in the integration process of program cost models and program review, (d) to discover which AACC Leadership Competencies (2005) were useful in each of their integration efforts, and (e) to determine what additional leadership skills may be necessary for successful transformation of processes and models in the future.

Due to the challenges faced by most community colleges of reduced funding and increased accountability, the researcher believed that a deeper understanding of these processes and models would allow educators to create their own models at their own institutions. Patton (1987) confirms:

Case studies are particularly useful where one needs to understand some particular problem or situation in great depth, and where one can identify cases rich in information—rich in the sense that a great deal can be learned from a few exemplars of the phenomenon in question. (p. 19)

These five objectives will assist in the understanding of new business and finance models and processes that have been developed by Northwestern Michigan College (NMC) in Traverse City, Michigan, and Central Piedmont Community College (CPCC) in Charlotte, North Carolina.

In this chapter, the results of the data collection process and the analysis are explained. This multi-site mixed methods case study provides “an intensive, holistic description and analysis of a single, bounded unit” for both colleges (Merriam, 2009, p. 203). The following six questions were used to address the objectives of the study:

The primary question is:

*How do community college leaders transform program cost models and program review processes to create improved efficiencies and/or effectiveness?*

The five additional research subquestions that informed the overall question are:

1. What are the new community college program cost models that have been developed to create efficiencies and/or promote effectiveness?
2. What were the stated purposes of the program cost review processes?
3. What are the critical components that led to the successful integration of academic program review processes into the new program cost model for institutional effectiveness?
4. Utilizing the current AACC competencies as a framework, what leadership competencies led to a successfully integrated process?
5. What additional competencies or approaches were evidenced in successful transformations?

## **Organization of this Chapter**

Each college will be described separately to give the reader a deep and detailed understanding of each institution's uniqueness and their settings. The findings and a cross-case analysis will be presented and explained after the site descriptions of each college based on the transformative and integrative practices and processes of program review and program cost models. A summary of the findings will conclude the chapter.

## **Research Evidence**

The researcher utilized four sources of qualitative data related to each case—interviews, document analysis, observations, and one source of quantitative data from a leadership survey—to arrive at the four findings of this study. Stake (1995) states that for case study methodological triangulation, “we are again speaking principally of observation, interview, and document review” (p. 114). Several naturalistic data collection methods were used, as described below.

### **Observations**

The researcher observed a total of three meetings. Two meetings were observed at NMC in November and December 2012. The first was the Leadership Group meeting comprised of academic chairs, union representatives, and staff and administrators. Members of the Planning and Budgeting Council are also members of the Leadership Group that inform and advise the president. The second meeting attended was an NMC Board of Trustees meeting on December 17, 2012. One meeting, the SACS (Southern Association of Colleges and Schools) Leadership Team, comprised of 11 administrators who were working on the review and submission of the SACS self-study, was observed at CPCC on November 15, 2012.

## **In-Depth Interviews**

Thirteen in-depth interviews, lasting 60–75 minutes in length, were conducted with key administrators at each college, five at NMC and eight at CPCC, between November and December 2012. The 22-question interview data were transcribed, coded, analyzed, and organized by research question and then by analytic categories and subcategories guided by the conceptual framework from the literature review (Appendix G). Each interview was designed to identify the history, context, implications, change, and improvements of the program review and program cost models at each college. Additional probing questions were asked as necessary for clarification of conveyed meaning. An informal exchange with one of the college's presidents occurred briefly during an on-site visit, which served to further inform this research and add richness to the study. Bloomberg and Volpe (2012) confirm that interviews “elicit in-depth, context-rich personal accounts, perceptions and perspectives” (p. 195).

The names of the persons interviewed were gathered from each college's director of institutional research, who provided the contact information of the key administrators. Administrator responses were coded individually and each administrator was given an identifier (e.g. NMC1 or CPCC2) to ensure the confidentiality of the administrators. Each of these referred contacts was sent an email in late October 2012 inviting them to participate in an on-site interview. Five participants responded from Northwestern Michigan College and eight responded from Central Piedmont Community College. A copy of the email request was also sent to the institutional research director at each college. It was important to this study that the administrative contacts be similar across each institution, e.g., provosts, chief financial officers, deans, and directors, in order to

determine any perspectives or insights that pertained specifically to these roles in relation to the research questions. Not all roles aligned consistently given the uniqueness of each college; however, there were similar perspectives discovered in comparable positions.

Once the interview and meeting schedule was finalized via email, the researcher travelled to each campus, in November and again in December for NMC and in November to CPCC. Due to the proximity of Northwestern Michigan College to the researcher, it proved more convenient to spread the interviews over two separate days. Additionally, the interviews were scheduled as much as possible around specific meeting dates related to the research. The interviews were held predominantly in each participant's office during working hours and lasted 60–75 minutes. Prior to the interviews, the researcher had provided the participants with an overview of the research, the IRB approval, and the consent form. In only one case, due to limited availability, were two participants combined in one interview.

Of the 13 administrators interviewed, 2 were males, and 11 were females. No persons of color were interviewed. The two male administrators each served as the chief academic officer at their respective colleges. The researcher did not feel that gender would be a variable in the discussion of program review and program cost studies. The literature review also did not indicate that gender was an influencing factor in these processes. While Eddy (2010) writes that the language used in studies of leadership at community colleges reinforces male norms, she states that more women are entering community college leadership in the last 20 years and contributing to the literature (p. 127). The researcher was also influenced by Gillett-Karam's (1997, as cited in Eddy,

2010) study that found that “leadership actions were more strongly tied to specific situations, not gender differences” (p. 128).

### **Document Review**

From August 2012 through March 2013, multiple documents, budgets, strategic plans, accreditation reports, minutes, program reviews, and website analysis from each college were collected, reviewed, and analyzed based on their significance to the research. Documents were then listed and coded in a Document Summary (Appendix L). The researcher followed up with key administrators by email when there were further questions on the content of the documents. It is these documents that Bloomberg and Volpe (2008) contend “provide contextual information and insights into material culture” and “facilitate the discovery of cultural nuances” (p. 252).

### **Leadership Surveys**

Based on the AACC Leadership Competencies (2005), a survey instrument was designed. The instrument used a Likert-type scale for respondents to indicate the degree of current and future use of the specific items in their work in program cost and program review development and implementation (Appendix H).

The thirteen 33-question leadership surveys were sent electronically prior to each interview and were returned either in person, after the face-to-face interviews, or scanned and then returned by email. Upon receipt of the surveys, the individual responses were entered into an Excel spreadsheet and also analyzed using SPSS software for descriptive statistics to offer further understanding of the application of the AACC Leadership Competencies by key administrators for these processes and models. All responses were confidential; however, the colleges are identified in this study.

## Presenting the Findings

Four key findings emerged from this study directly related to the research questions. These findings, followed by the case study descriptions, are described in depth based on the illustrative quotations taken from the interviews, documents, and observations. It is the intention of the researcher to portray multiple perspectives and thus capture the detail and complexity of the subject matter. When appropriate, significant data from the surveys are woven in with the interview data to support and solidify the discussion. Survey data will also be provided in the tables that follow.

The findings are:

*Finding 1:* Driven by transparent practices and business-oriented cultures, both colleges have reinvented and sustained program review processes and created new pragmatic program cost models. The new models have resulted in improved accountability and increased entrepreneurial thinking; however, elimination of programs and personnel has not occurred.

*Finding 2:* A majority of respondents indicated that key components that lead to successful integration are (a) transparent, meaningful, and accessible data; (b) development of new funding models; (c) acceptance and utilization of the models by faculty and staff; and (d) greater responsiveness to internal and external stakeholder needs.

*Finding 3:* NMC rated the AACCC Leadership Competency Communication the highest for current use; CPCC rated Community College Advocacy the highest. These competencies remained the top competencies for future use by each college. CPCC rated Resource Management as the highest rated competency from current use to future use

and NMC rated Community College Advocacy with the greatest change from current use to future use.

*Finding 4:* The overwhelming majority of participants reported that transformative and collaborative leadership and entrepreneurial and risk taking approaches were the additional competencies and approaches needed by key administrators for successful transformations.

### **Case Study Site Descriptions**

The following narrative will describe each college in six key areas based on the observations, interviews, and document analysis that occurred from October 2012 through March 2013. The six areas are: (a) mission, vision, and overview; (b) leadership; (c) history and demographics; (d) financial and economic; (e) culture; and (f) governance. The goal is to provide the reader with detailed and thorough descriptions of each college and its work in developing and implementing program review and program cost models through the use of “thick description” (Geertz, as cited in Stake, 1998, p. 42) to stimulate further reflection and optimizing the opportunity for others to learn (Stake, 1998, p. 42). Bloomberg and Volpe (2012) suggest that the document analysis provides “factual evidence regarding the context and its culture, and it also uncovers environmental factors that may impact perceptions of this context” (p. 149).

The findings for this research were based on two colleges: NMC and CPCC. The researcher visited each college on separate occasions in the fall of 2012 to gain greater knowledge of each institution. Stake (1995) confirms the need for qualitative researchers to “treat the uniqueness of individual cases and contexts as important to understanding” (p. 39). The first visit to NMC resulted in interviews with three of the five key



administrators and attending a Leadership Group meeting, with 40 strategic planning team members. At the second visit, the researcher completed two additional interviews, administered the last two surveys, and attended the NMC December Board of Trustees meeting. Each of the five NMC key academic administrators, including financial services and institutional research, who were interviewed report directly to the president and serve on the President's Council. Four days were also spent at Central Piedmont Community College in November 2012 interviewing eight key administrators in similar roles and also attending a SACS accreditation meeting in preparation for CPCC's accreditation report submittal in February 2013.

A description of the leadership competencies used at each college for program review and program cost models are discussed in the findings section in support of the research questions. The researcher will provide evidence of the types of leadership style and competencies used by key administrators from the interviews and documents.

**Northwestern Michigan College.** "NMC's central purpose is to provide our learners with the skills, experiences, and values that allow them to create economic and social wealth during their life's journey" (Northwestern Michigan College, 2012f).

A purposive sampling process was used to identify Northwestern Michigan College as having a well designed and integrated program review and program cost model process. Among representatives of the Michigan Occupational Deans Council (MODAC), Northwestern Michigan College is held in high regard for its models and its integrated planning processes. In a recent 2012 Higher Learning Commission Check-Up report, NMC's planning process was recognized "as inclusive, dynamic, and aligned, and that it is based on a continuous improvement cycle" (Northwestern Michigan College,

2012g, p. 7). The Higher Learning Commission of the North Central Association is the regional accrediting body for Northwestern Michigan College.

***Overview of Northwestern Michigan College: Vibrant, value, and community support.*** The mission of Northwestern Michigan College is “Northwestern Michigan College provides lifelong learning opportunities to our communities.” The mission was adopted in 1998 and has been reviewed and approved by the Board of Trustees as Board policy in 2007 and most recently in 2010 with no changes.

The vision of Northwestern Michigan College is:

NMC will be the resource of choice for higher education, lifelong learning and cultural experiences. NMC will be an essential contributor to quality of life and a vibrant economy. We will demonstrate collaborative and inventive approaches to education and training for liberal studies, careers, interests and emerging learner markets. (Northwestern Michigan College, 2012f)

A Northwestern Michigan College administrator iterated the importance of the vision as staff are asked consistently, “How can we improve things? That is part of the culture of NMC, looking at ways to improve.” The vision, as the mission statement, was approved and reviewed by the Board of Trustees on the same dates, 2007 and 2010. NMC is one of 28 community colleges in Michigan.

Northwestern Michigan College is located in Traverse City, Michigan, at the base of two Lake Michigan peninsulas, Leelanau and Old Mission, known for its natural beauty and its high quality of life (Northwestern Michigan College, 2013). Traverse City is also commonly known as the “Cherry Capital of the World” due to its prevalence of tart cherry trees, and as a four-season resort area with a growing reputation for food and wine (NMC website, 2013).

Northwestern Michigan College is committed to the economic vitality of the region and engages with the community through its conferencing center, the Denno Museum Center, the Rogers Observatory, public radio, and a TV station, and is actively involved in the areas of international affairs, land use, and transportation (NMC website, March 2013). This work was considered as a critical and distinguished characteristic, among others, of Northwestern Michigan College in the 2010 AQIP Systems Appraisal Feedback report (Northwestern Michigan College, 2010, p. 8).

*Leadership.* NMC, under its current president, Timothy J. Nelson, has been viewed as a progressive college. The June 2012 President's Annual Review states that "NMC is consistently seen as being 'ahead of the curve' or demonstrating 'innovative solutions' to significant issues that have included decreased enrollment, legal issues, state appropriations, and regulatory changes" (p. 24). On the morning of November 2, 2012, while attending the Leadership Group meeting as part of NMC's strategic planning cycle, the researcher briefly discussed with the president the topic of program review and program cost model integration and the creation of new models. Mr. Nelson enthusiastically exclaimed, "We have to be revolutionary, not evolutionary!" He further elaborated, "We have to create value [for our students]. We need to create wealth—experience, skills, and values to create economic wealth." He also added to the conversation before having to leave, "If we look at education as a profit center, we would ask instead what we need from state government, change and enroll international students, and include venture capital. We would add entrepreneurship and leverage state investment." He left shortly thereafter, but not before asking the researcher as well as the

other two NMC staff sitting at my table, “What are the new markets [for community colleges]? What is our ‘Blue Ocean?’”

Mr. Nelson is also viewed by other community college presidents as progressive and passionate about the value of a community college education for a student and for its impact on the community. While the researcher attended the November 2, 2012, Leadership Group meeting, Mr. Nelson reinforced this perspective by asking his staff as they were about to work on coordinating their operational planning as part of their integrated strategic planning efforts: “We are looking at the whole college/whole student. What is the value? What is the differentiated value proposition as a student?” (NMC Document Summary, document 18, Leadership Group Meeting, 2012).

The academic and financial leadership of NMC that reports to Mr. Nelson is comprised of four vice presidents: the Vice President for Educational Services, the Vice President of Finance and Administration, and the Vice President of Lifelong and Professional Learning, and a vice president position for Enrollment Management and Student Services recently added to the President’s Council. Three of the vice presidents, one executive director, and one director were interviewed for this study. Each of the administrators has worked at NMC for a minimum of 10 years and has been promoted within the organization. Several have worked at NMC for over 20 years, with one administrator stating reflectively, “I have been through every major transition of the college since then and into my current position which continues” (NMC3). Mr. Nelson has served as president since 2001.

*History and demographics.* Since its beginning in 1951 at an airport terminal building in Traverse City, NMC has grown to four campuses, including its 100-acre main

campus, serving over 5,400 students annually in over 60 credit programs that lead to professional certificates and associate degrees and over 10,000 students in non-credit programs. Founded to create an avenue for citizens to pursue an affordable college education, students are also able to obtain bachelor's and master's degrees through their University Center, a nearby site or additional location, housing branches of nine universities. The ability to provide students access to 4-year college and university programs was ranked the most important element of NMC's role in the community (EMC Research, 2012, p. 17), followed closely by the ability to provide associate degree education.

NMC's constituents hold a decidedly positive view of the college as well (Figure 5). In a December 2011 EMC Research Northwestern Michigan College Community Survey presentation, 72% of the 600 respondents indicated that its local residents hold NMC in high regard. Additionally, NMC's overall rating and the overall academic reputation has continued to increase positively from 2004–2011 from 91% to 98% and 89% to 98%, respectively. The community also views positively the manner in which NMC manages its finances, a very important factor in today's economy.

<b>Community Attitudes about NMC's Overall Effectiveness</b> (% "Positive" Ratings: "Don't know" respondents excluded)	<b>2004</b>	<b>2008</b>	<b>2009</b>	<b>2011</b>
NMC overall campus appearance	97%	95%	95%	98%
Overall academic reputation	89	93	97	98
Overall rating of NMC	91	96	98	98
Availability of scholarships and financial aid	78	81	92	97
Overall reputation of NMC in the community	99	96	95	96
Value of an NMC education	--	95	93	94
Job NMC does responding to learning needs of community	97	88	93	93
Job NMC does communicating with the community	--	77	98	91
Job NMC does managing finances	92	75	86	90

*Figure 5.* Community attitudes about NMC's overall effectiveness. (EMC, 2012)

The population of their six-county service area that includes Antrim, Benzie, Grand Traverse, Kalkaska, Leelanau, and Wexford counties is approximately 168,661 individuals as of 2011, representing 1.7% of Michigan's total population. By 2015, regional population in their service area is expected to grow by a moderate 2.6% rate to 173,063 inhabitants (Traverse City Area Chamber of Commerce, 2011).

*Financial and economic factors.* Central to this study is the impact of financial and economic factors on community colleges. It was important to the researcher to understand what drove each college to create their new models and what internal and external resources they utilized. While reductions in state funding were the key drivers, it was also important to understand how colleges create new partnerships and models to fund the development and sustainability of their programs and services. It was also important to understand how colleges weighted their consideration of which programs and services to fund given finite and fluctuating resources.

As a rural and sophisticated community college, NMC has proven successful in managing its key resources, resulting in an annual surplus of its operating budget of approximately \$400,000, despite enrollment revenue shortfalls (NMC President's Annual Review, 2012, p. 25). NMC has a 2012-2013 General Fund budget of over \$42,000,000. The General Fund is financed primarily through four sources of revenue: tuition, fees, state appropriations, and property taxes. To offset these declining revenues for 2012-2013, Northwestern Michigan College implemented new registration fees and technology fees, as well as a facility fee that was developed specifically for out-of-district and out-of-state students. The college's financial position for fiscal year 2012 increased approximately \$2.9 million as compared to fiscal year 2011 due to an increase in net tuition and fees of approximately \$2.1 million based on a 3% increase in tuition rates in-district and 5% for out-of-district and out-of-state. The Board of Trustees has also approved a tuition increase of 3-4% for fiscal year 2013. In 2011-2012, the well endowed and highly regarded Northwestern Michigan College Foundation contributed approximately \$200,000 in support of programs and scholarships.

Yet as tuition and fee rates increase, other areas of the General Fund budget have declined. Property taxes decreased approximately 2% and the bond millage collection increase was 7% due to property tax value declines and an increase in the debt millage rate in order to meet required bond debt payments. State appropriations decreased 4% in 2011-2012, although Northwestern Michigan College recently reported a 3.4% increase in community college appropriations for fiscal year 2013 from the state (Northwestern Michigan College Financial Statements and Supplementary Information, 2012h).

The most important factor impacting college revenue is enrollment. As mentioned previously, enrollment has continued to decline at NMC in the last several years and is projected to continue to decline to 5% below 2012. Northwestern Michigan College's 2011-2012 Financial Statements and Supplementary Information report that this reduced enrollment level is within the range of the 2009-2010 enrollments, a time when most colleges saw a dramatic rise in students' return to college due to the economy. Federal Pell grants decreased 4%, due to a decline in the number of eligible students and number of contact hours generated. Additionally, the United States Department of Education discontinued the additional summer Pell grants to students.

It is these mitigating factors of decreased funding, enrollment, and community and state financial support, combined with increased tuition rates and decreased Pell funding, that is challenging the financial stability of Northwestern Michigan College and its students. In fact, the college reports:

The economic outlook for the College is tied heavily to national and state economic conditions. Although federal and state appropriations have been determined for the upcoming fiscal year, it is important to note that in times of financial constraint, such funding can be adversely impacted. The College has responded to increased uncertainty by becoming more efficient. (Northwestern Michigan College Financial Statements and Supplementary Information, 2012h, p. 12)

Mr. Nelson reports in his President's Annual Review (2012f) to the Board of Trustees:

After multiple years of record enrollments, we experienced a decline in both fall and spring. By following our processes and making timely adjustments to both personnel and schedules, we successfully navigated the year and expect to end the year with a small surplus. (p. 2)

*Culture: Quality improvement, cooperation, innovation and risk taking.* E. H.

Schein (2004) defined culture in his book, *Organizational Culture and Leadership*, as:



A pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (p. 17)

Organizational culture is the life map of basic held assumptions and shared meaning within an organization that shape member behavior (White, 2007). A NMC Board Policy (2012) on culture reinforces two key values and beliefs in its personnel and in its commitment to life-long learning,

NMC is committed to the development of the talents and continuous learning of all its faculty, staff, and administrators. NMC manages its employees through effective human resources processes. The President shall exercise and promote innovative and creative leadership in pursuit of culture at Northwestern Michigan College. (Northwestern Michigan College, 2007)

The culture of NMC would be described as driven by four key factors or values. They are (a) continuous quality improvement, (b) collaboration, (c) innovation, and (d) risk taking. All four elements are critical to the future of community colleges (AACC, 2005; Alfred, 2011; Head & Johnson, 2011; Manning, 2011).

The first value is evidenced by the commitment of the organization to continuous quality improvement and the use of data to inform decisions. It has culminated in increased efforts as a result of an AQIP Action Project in 2012 that was designed to create an aligned planning process. It is worth noting, however, how staff at NMC feel this work has evolved. In the 2012 NMC Employee Engagement Survey (NMC, 2012d), over 97% of employees expressed their commitment to continuous quality improvement and 89.2% confirmed that they have the necessary skills to help NMC achieve its strategic directions.

One key administrator supported both the value of continuous quality improvement and cooperation when describing work with faculty:

When there are processes or methodologies that make student success or student learning problematic, then we have to figure out ways to clear those away to get rid of those barriers. That has been my approach in terms of continuous improvement is to put the evidence on the table and say, “You know this isn’t good” and what I’ve been really benefited by is that the people at NMC... I feel they get it...we don’t like to do more work...but the fact is that there is an agreement that that is where we are going. (NMC2)

The researcher observed further verification of the importance of data and continuous quality improvement at the December 17, 2012, Board meeting, when a staff member from the Office of Research, Planning, and Effectiveness, after the completion of a professional development training, received an award. Mr. Nelson commented, with a smile and a handshake when giving the award to the recipient, “We expect great research,” a positive and yet foreshadowing statement of the data-driven culture of NMC.

Collaboration, the second factor, is discussed by several participants as it relates to their work with faculty and staff and their preference for this style.

That is not the mentality or the culture we want to have. If another unit is trying to achieve one of our strategic goals, we all own the strategic plan. If that person needs resources and we legitimately and honestly identify extra capacity, which doesn’t happen often, then on our honor, it is our job to say, hey, we have some extra capacity. Let us help you achieve your part of the strategic goal as an institution. We are not there completely, but that is where we want to get to, I think. (NMC2)

Collaborative leadership at NMC will be discussed in the findings as it became evident that this was an important and pervasive component to the development of program review and program cost models at NMC.

Innovation and risk taking can often go hand-in-hand as they do at NMC. The Lumina Foundation Strategic Plan 2013-2016 (2013) asserts when discussing new models for higher education that “Developing each of these new models requires fresh thinking and new approaches—a ‘big idea’—that can produce a breakthrough that leads

to dramatically improved results.” This is supported at NMC. A staff member commented:

I have a President who often says, something to the effect, “fail soon, fail often, fail cheaply.” He really wants people to try different things, because that is one of the ways that we can improve ourselves, and you provide people the resources to do it. (NMC1)

NMC was also praised in the 2010 Systems Portfolio (NMC, 2010) regarding its innovative business practices:

Particular NMC Units, such as Water Studies and the Great Lakes Maritime Academy, have developed strategies and business models for performance for the next one to three years that could serve as best practices for strategic planning in other areas of the College.

The conceptual framework for this study and the processes of program review and program cost studies support these four factors of NMC’s culture: continuous quality improvement, collaboration, innovation, and risk taking.

*Governance.* A seven-member Board of Trustees and Mr. Nelson, using a shared governance model, serve NMC. Mr. Nelson is NMC’s 9th president and the second longest-serving president next to NMC’s first president, Preston N. Tanis, who served for 19 years from its founding in 1951 to 1970. Mr. Nelson brings his previous experience as a faculty member in business and as a business owner to the role. He previously served early on as campus housing resident manager and later returned as chief financial officer at NMC before seeking the presidency. Understanding both the perspectives of the board and the president are vital to the creation of new processes and models. Piland and Butte (1991) report, “Trustee views on funding, governance, and educational programs often translate directly into college policy” (p. 7).

NMC employed 98-fulltime faculty in 2012, an increase from 89 in 2011, and 217 part-time faculty in a non-union faculty environment. There are 110 full-time administrators with over 250 additional part-time staff (NMC HLC Annual Institutional Data Update, 2012). Over 56% of employees reported that shared governance was effective at NMC, an increase of 3% in their perceived value of effectiveness from the previous year (NMC, 2012d, p. 1).

The tools that have been developed to support this valued work are NMC's cost-to-educate model and its academic program review, called the A3, which refers to a European paper size and the innovative product used by Toyota for organizational problem solving.

The next section describes CPCC, the second of the two colleges in this study.

**Central Piedmont Community College.** Central Piedmont Community College (CPCC) was chosen as the second site for this two-case study because of its Program Cost model, which was featured in the December 2011 Leadership Abstracts of the League for Innovation in the Community College (Alexander, 2011). Based on the literature indicating that business models such as CPCC's were critically needed for community colleges, the researcher contacted the two authors of the article by email in early January 2012 to ask if CPCC would be willing to participate in the research. Additional communications followed in March 2012 and an application to CPCC's IRB was submitted in August 2013. IRB approval was received in early October 2012.

CPCC is a large, urban campus located in North Carolina. It is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate degrees, diplomas, and certificates. CPCC is part of the North Carolina

Community College System, which is one of 58 community colleges in a centralized state community college system. These factors including its program review process were the key drivers for utilization of CPCC as a relevant case with NMC for this research.

***Overview: Workforce ready and community driven.*** CPCC, the largest of the 58 community colleges in North Carolina, is located in downtown Charlotte, with five additional campuses distributed throughout Mecklenburg County. In 2002, the CPCC Board of Trustees reaffirmed the following vision statement: “Central Piedmont Community College intends to become the national leader in workforce development” (Central Piedmont Community College, 2012b). CPCC is an integral part of economic development and workforce education efforts in Mecklenburg County. Its 2011-2012 Annual Report (CPCC, 2012b) confirms the vision with the opening message from Dr. Zeiss, CPCC’s third and long-serving president: “The College is here to serve the community. CPCC’s focus remains student success and workforce development” (p. 1). CPCC was named “Community College of the Year” by the National Alliance of Business in 2002 and was previously recognized as one of the two best colleges in workforce development by the U.S. Government Accountability Office.

Its mission is as follows:

Central Piedmont Community College is an innovative and comprehensive college that advances the life-long educational development of students consistent with their needs, interests, and abilities while strengthening the economic, social, and cultural life of its diverse community.

The college accomplishes this purpose by providing high-quality, flexible pre-baccalaureate and career-focused educational programs and services which are academically, geographically, and financially accessible. This purpose requires a fundamental commitment to student success through teaching and learning excellence within a supportive environment.

CPCC's vision and mission of student success, centered on workforce development, is integral to the county and region of North Carolina. In the 2010-11 State of North Carolina Community College System Accountability report (CPCC, 2012a) in which there are eight measures (prior to 2011; seven in 2012-2013), CPCC reported that 90% of over 1,200 respondents agreed that CPCC's services to business and industry were "very good" to "excellent." In the same report, the college also met the state performance standard as 96% of students surveyed who were program completers and non-completers reported "being satisfied with the quality of the college's programs and services" (CPCC, 2012a).

*Leadership.* Dr. P. Anthony Zeiss is CPCC's third president, serving in this role since 1993. He is viewed as a man with exceptional energy with a passion for the community college and for workforce education. The Charlotte Chamber of Commerce president commented on Dr. Zeiss:

He has made Central Piedmont relevant—I can't imagine it being more relevant—to the workforce development needs of our community. What I love about Dr. Zeiss, though, is that he's passionate about whatever he's passionate about. And he's passionate about many things. (Boudin, 2012, p. 2)

"It's all about finding your purpose," Dr. Zeiss says. "Mine is to make a difference" (Boudin, 2012, p. 1).

CPCC's academic administration includes 15 executive, vice, and associate vice presidents; 15 deans; and four assistants to the vice president, including two for learning. Eight administrators that included key executive academic positions were interviewed for this study. Each of the administrators has served at CPCC for 4 years or more. Several have worked at CPCC for 20 years and more. One administrator said, when describing

the energy, the drive, and the culture at CPCC, “Our charge is to go at mach speed and create the biggest and the best thing, where we want to be” (CPCC4).

*History and demographics.* As a result of the 1963 North Carolina Community College Act, CPCC was formed merging what were once Mecklenburg College and the Central Industrial Education Center, previously housed in a downtown high school facility. When it started, there were 23 degree and diploma programs; now there are more than 100 degree, diploma, and certificate programs, along with a comprehensive literacy program, and an extensive array of corporate and continuing education offerings (CPCC, n.d.-a).

CPCC’s Central Campus, its original site, is located in downtown Charlotte, North Carolina, originally called Charlottetowne, named in 1762 in honor of the British Queen, Charlotte Sophia, while the county was named Mecklenburg to denote the region in Germany where she was born. It is a large metropolitan city of 695,9995 people and home to major banks and corporations, including Bank of America, Lowe’s, and Duke Energy. Mecklenburg County, where Charlotte is located, is home to 902,803 residents.

With its mission and vision focused on workforce development, CPCC is a strong community partner with the Chamber of Commerce and the Charlotte Regional Partnership, an economic development corporation, among others. The Charlotte Chamber of Commerce president, Bob Morgan, recently complimented CPCC’s president: “Dr. Zeiss is uniquely in touch with employers, keeping a finger not just on what the needs of a company are today, but what are the needs coming in the years ahead” (Boudin, 2012).

CPCC has five additional campuses serving outlying areas, with each located within 30 minutes of downtown. Several of the five campuses unify their programs and courses by specific disciplines. CPCC Merancas Campus is home to the college's Public Safety and Transportation Systems programs. CPCC's Cato Campus houses Horticulture Technology, Interpreter Education, Paralegal Technology, Office Administration, and Turfgrass Management programs. The researcher visited three of the six CPCC campuses: Central, Cato, and Merancas.

In 2011-2012, CPCC served 58,788 students. This represents 29,213 credit (curriculum), 10,200 basic skills, and 22,666 non-credit (corporate and continuing education) students. The terms in parentheses are CPCC's terms for this classification of students, as reported in their enrollment report (CPCC Fact Book, 2011-2012). CPCC's enrollment reached record levels during the recession of 2008-2010, to over 61,000 students, and is now returning to enrollment levels comparable to 2006-2007, or 58,964 students. This pattern is similar to many community colleges, which are experiencing a leveling or decrease in enrollment since the improvement in the economy (Dunbar, Hossler, & Shapiro, 2011).

*Finance and economics.* Although the sources and amount of the decreases were different between the two colleges, the impact of state and local decreases on CPCC, not unlike NMC, had a direct impact on program review and program cost models. As one of 58 colleges in the North Carolina Community College system, CPCC receives its funding from four different sources. The primary source of funding is state funding, which is determined by a FTE (full time equivalency) rate set by the North Carolina legislature and is reimbursed based on the previous year's enrollment. The second source of income



is tuition. Tuition rates for CPCC students for 2012-2013 are \$69 per credit hour for residents and \$261 per credit hour for non-residents and are set by the state. Mecklenburg County contributes the third source of revenue, providing from 7–13% annually for facilities maintenance, utilities, and a percentage of salaries. The fourth category is institutional funds based on county construction bonds, grants, and CPCC Foundation contributions.

Table 2 shows CPCC’s 2011-2012 and 2010-2011 operating revenues.

Table 2

*Central Piedmont Community College Operating Revenues*

Source	2010-2011		2011-2012	
State	\$62,188,849	35.8%	\$52,379,444	27.8%
Tuition	\$25,791,749	14.9%	\$27,877,211	14.8%
County	\$23,900,000	13.8%	\$26,150,000	13.9%
Other	\$61,741,173	35.5%	\$81,757,379	43.5%
Total	\$173,621,771	100%	\$188,164,034	100%
Expenditures	\$163,002,521		\$184,926,271	

Similar to its national counterparts, CPCC experienced large enrollment growth from 2006-2012. CPCC experienced 35% growth in FTE enrollment during this period; however, enrollment is anticipated to flatten by 12% through 2017 (CPCC, Fact Book, 2011-2012). CPCC has experienced a \$20 million cut in the previous 3 years from state and county funds (CPCC, 2012d), although a small portion of funds has been restored for 2013-2014. When addressing the County Board of Commissioners in May 2012 for the

CPCC 2012-2013 allocation, Dr. Zeiss stated, “When you think about CPCC, think about the return on investment that you’re getting” (Mecklenburg County Board of Commissioners Minutes, May 29, 2012). Dr. Zeiss was advocating not only for the college, but also for his own college’s workforce due to the county allocation that covers salaries. CPCC was successful in receiving a restoration of funding from the county for 2012-2013, although not to its previous levels.

CPCC previously received approximately \$4,000 per FTE, no matter the cost of the program in which students were enrolled for fall and spring semesters. They do not receive summer curriculum or credit reimbursement. Recently the North Carolina Community College System has created a new model, “a wonderful thing,” one CPCC administrator commented, which is based on tiered funding depending on the program type. The vocational technical programs that create jobs are reimbursed at a higher FTE formula, or tier. The highest tier reimbursement rate, called Tier 1, is \$5,378. Non-credit FTE is reimbursed at a lower rate, ranging between \$4,895 and \$4,413. This new model has allowed CPCC, with assistance from its program cost study that determines high cost/high demand programs, to adjust its program distribution to more closely align high-cost programs with the new reimbursement rates. CPCC is better able to cover the costs of the programs due to the higher FTE reimbursement rates. A CPCC administrator stated in reflecting on this new model:

That is the new way of doing business at a community college. You have to have the tool that helps make these decisions. I remember times when you had more money than you knew what to do with. Not so much now, never ever again.  
(CPCC2)

Mecklenburg County’s unemployment rate of 10.1% has not returned to its pre-2008 level of 7.7%. CPCC’s role in improving this rate is vital to the community. Its

mission and its programs are primarily focused on workforce development. Partnerships with local, regional and global corporations are strong. CPCC partners with Siemens to provide manufacturing and job skills training. Jackie Bray, a Siemens employee who received skills training through a CPCC program, sat with Michelle Obama during President Obama's State of the Union address (Stancill, 2012). Also, CPCC recently announced its partnering with a German chamber of commerce on a new certification program that meets German business standards. German companies looking to expand in the United States will have an automatic pool of candidates. "Now everybody's looking at us," Zeiss said. "We're looking to become the best European (friendly)—particularly German-friendly—college in America" (C. Smith, 2012). CPCC has been direct in its approach with corporations by saying, "If you value the workforce we are creating for you, you need to help us" (CPCC2).

In general education, CPCC is also providing statewide leadership by changing mathematics in community college courses to become more customized to occupations, more statistically based. CPCC is working with secondary and business partners to determine what is needed for the future. CPCC remediates 76% of its high school students (CPCC2) and is working expeditiously to correct this concern. One administrator emphasized, "If our goal is to help the student, we are in business. To make an economic impact is student success" (CPCC2).

*Culture: Agile and entrepreneurial.* CPCC under Dr. Zeiss's leadership has been through several economic cycles over the 20 years he has served as president. When the college's state budget was reduced by 25% and enrollment ballooned by 35% in 2009, Dr. Zeiss turned to the business and workforce community for support. Due to this urgent

need, Dr. Zeiss called on local businesses and donors and raised \$1.2 million over 3 years through the college's foundation. Kotter (2008) defines "establishing a sense of urgency based on the heart and the head" as the first step of creating major change. The collaborative efforts saved 66 classes that otherwise would have been cut. In addition, Zeiss worked with the local transportation agency to release bond funds that were frozen due to the fiscal crisis (Boerner, 2012).

But where CPCC has expanded the most is through entrepreneurship. The college has a services corporation that incubates education-related businesses thought up by instructors. One instructor developed soap-opera-style videos for English-as-a-second-language students that were purchased by McGraw-Hill. Others have written their own textbooks. Revenue goes to the teacher and the college—and allows the college to admit more students. "It's a new day," says Zeiss. "You can't sit and bemoan the dark. You have to light a candle" (Boerner, 2012, p. 33).

The entrepreneurial culture of CPCC was pervasive and influential on the development of its program cost study process. When the actual costs of its high-cost programs were determined using their program cost model and state and local funding was being cut, Dr. Zeiss and his administration called upon business and organizational partners to help fund certain programs, particularly those in health. The culmination of increased cost, increased demand, and decreased funding resulted in new business partnerships. It has also created new health programs resulting in a new cytotechnology program that is being partially funded for 3 years by the companies that will hire CPCC's graduates.

CPCC's structure and state funding also contribute to the entrepreneurial and agile development and delivery of programs. The Dean of Corporate Continuing Education works closely with the academic deans and their sales force markets both credit and non-credit programs. The dean of their credit area serves as the liaison for training in either format, and curriculum development is the same across both delivery systems. Both credit and non-credit tuition contributes to the overall tuition for the college. A CPCC administrator described the positive financial impact of this agility on the college and departments: "One of the things we do here, which they don't usually do at most community colleges, is we will take a somewhat low-enrolled program and weave into continuing education where they can make it self-supporting." This flexibility, as another administrator stated enthusiastically, "is heaven compared to other colleges" (CPCC2).

*Governance.* The authority of the Board of Trustees of CPCC is established by Chapter 115D-12 of the North Carolina General Statutes and it consists of 12 voting members. The Charlotte-Mecklenburg Board of Education, the Board of County Commissioners of Mecklenburg County, and the Governor of North Carolina each appoint four members to the Board. The president of the Student Government Association serves as a non-voting member (CPCC, n.d.-d).

CPCC employs 1,100 employees, with 376 full-time faculty serving over 295 programs. No faculty union exists at CPCC or other North Carolina community colleges. The North Carolina Community College Faculty Association serves as a lobbying and advocacy organization for community college faculty. CPCC has a College Senate, which represents both faculty and non-administrative staff. It states that its goal "is to be a

proactive rather than a reactive body. To achieve this we must be ready to respond quickly and coherently to situations as they arise” (CPCC, n.d.-b). This goal is consistent with the responsive and agile culture of CPCC.

The next section addresses the key findings of this research. The findings address the research questions and describe the program cost models and program review processes at each college and the critical components of integration. The last two findings address the leadership competencies that were utilized to develop and implement the models and the leadership skills that will be necessary to drive future integration efforts.

### **Findings**

The evidence to support the effectiveness and efficiencies of NMC and CPCC’s program review and program cost study/cost-to-educate models are confirmed by the interviews of the 13 key administrators and the intensive document analysis as related to the four findings. Each interview transcript, as well as multiple college documents, reports, web pages, and resources was coded based on the Conceptual Framework of the literature review. The Coding Schema (Appendix F) that was utilized centered on efficiencies and effectiveness as well as the leadership competencies based on the evidence as follows. In order to assist the reader, each finding is generalized; however, specific quotations are related directly to each college given the uniqueness of the processes and the people of each institution. Although Barak and Brier (1990) contend for program review that “there is not a ‘true model’ for all institutions” (p. xii), it is the intent of the researcher to describe the background, components, and leadership skills that proved useful to each of the institutions in order that readers may determine what aspects may fit for their institutions.

## **Finding 1**

*Driven by transparent practices and business-oriented cultures, both colleges have reinvented and sustained program review processes and created new pragmatic program cost models. The new models have resulted in improved accountability and increased entrepreneurial thinking; however, elimination of programs and personnel has not occurred.*

**Northwestern Michigan College’s models: Cost-to-educate model and program review.** The cost-to-educate model and academic program review are two of the core components of the strategic planning process at NMC. Each process and model is discussed in depth. This section concludes with a description of how NMC is working to integrate these processes. NMC’s cost-to-educate model and its A3, its program-review model, are in Appendix G.

*Cost-to-educate model. History and context.* The cost-to-educate model at NMC has been an evolutionary process. It began in late 1999 and early 2000s with the review by administrators of Robert Dickeson’s (2008) *Prioritizing Academic Program and Services* as a result of escalating costs and a decrease in state support. One administrator commented that this process “really helped us to take a hard look at our programs and services” and, after presenting at The League for Innovation, the college consulted with Dr. Dickeson on the application of his model to NMC.

The original model prioritized the programs based on a series of metrics, which were not applicable to all programs. They examined quality and what was referred to as “essentiality” or essential to the mission of NMC. They later determined that essentiality was too subjective and determined that efficiency was more important. Efficiency was

based on the demand and costs of the courses and how helpful the classes were to students.

Then, starting in 2002, they divided up the classes and the program into quadrants of high demand/high cost, high demand/low cost, low demand/low cost, and low demand/high cost. It was the first time for several administrators that the program costs were all shown collectively on paper with the comparative rankings of programs by general fund percentage used. What they discovered was that this process was not as effective as they wanted.

In looking back perhaps too optimistically, we thought that all the data would be collected and somehow we would say: “Oh, now we know what programs we should invest in and which ones we shouldn’t.” The work did not generate that decision. (NMC1)

The cost-to-educate model in current use by NMC lists the programs and disciplines by direct cost over a two-year period. It is prepared by the chief financial officer and accessible through the college’s intranet to all internal stakeholders. Faculty and staff may see each other’s program costs.

*Implications and change.* What did result from this process was that several of their programs, beginning with Nursing and Aviation and then the Great Lakes Maritime program, had to develop new business plans and new strategies to sustain them. One administrator remembered, “We really knew we had to get down to the business of the program and the fundamentals of the program—what are we meeting for . . . and how do we position it financially so it is at its best condition? What was the real-time condition?” (NMC3).

The process continued to change as it was determined that the previous process was “too cumbersome and we needed something more agile” (NMC2). What occurred



that proved pivotal was the implementation of differential tuition for the Great Lakes Maritime Academy, and also the Construction Technology Program. The model was developed on the cost of the Maritime courses—not the general education courses—and was benchmarked to Ferris State University’s tuition as students progressed through the program and completed with a Bachelor in Business Administration with a Maritime option. Another vital element that occurred as a result of this process was the knowledge gained by faculty and staff of the cost of their programs. “Faculty and staff repeatedly said, ‘I had no idea that my program cost so much.’ The general sense had been, well, the college the bottom line balances, everybody will be fine” (NMC1).

*Areas of improvement.* In the last nine years, as a result of these previous products, NMC’s cost-to-educate model has steadily become simpler and more sophisticated, technologically resulting in increased usage by faculty and a reduction in staff time by 80 hours per year (NMC, 2012f, p. 56). The cost-to-educate model that exists today and which incorporates four years of program revenue and costs was developed by the previous chief financial officer and, now with the push from the current chief financial officer, it is made available electronically to all internal staff on the campus intranet. Division chairs can easily access the cost-to-educate graph to see where their program falls in order of most expensive to least expensive program and can work to adjust their costs each semester. Tuition revenue is updated each semester as part of the model. The statement from one administrator reinforces the basic practicality and portability of the tools as she had noticed that increased faculty use, “Some Chairs carry their graph with them” (NMC4).

*Academic program review. History.* As the cost-to-educate model became simpler and more effective, the desire to create a more efficient program review process also occurred. NMC had three separate processes: the PSSA (Program and Service Self Assessment), the Program Review of Occupational Education (PROE), and annual planning. NMC was aware that it needed to change and integrate their processes, particularly the PROE, given the requirement of the Carl D. Perkins Act for the review of career and technical programs. It took two years to confirm that their system was not working due to the time lag of their previous program review cycle.

In 2008, a new model, the A3, named after a lean manufacturing business tool originally conceived by Toyota, was proposed by one of the directors and supported by the administration as an AQIP Action Project in the category of “Measuring Effectiveness.” The new program review model streamlined the previous program review processes. It also conformed with the Higher Learning Commission’s Principles of Higher Performance Organizations due to its broad level of involvement of faculty and staff, the clear focus on meeting the expectations of students and stakeholders, and the agility, adaptability and foresight to use information in a quality-driven adaptive approach (NMC, 2009, p. 1).

The components of NMC’s program review for each academic program are listed on a two-page 11 × 17 inch document that includes on the left side the current state of the program) (Appendix H):

- Program Outcomes – targets and results (based on four levels of evaluation):

- Learner Perception – year-end program enrollment, quality of instruction, overall quality of course, learner program satisfaction, and non-traditional participation (Perkins core indicator 5P2).
- Learner Demographics – course retention rates, course enrollee success rates, course completer success rate, graduation rate (Perkins core indicator 2P1), student retention or transfer (Perkins core indicator (3P1) and non-traditional completion (Perkins core indicator 5P2).
- Skill Transfer – Technical Skill Attainment (Perkins core indicator 1P1) and student placement (Perkins core indicator 4P1)
- Results – (Advisory Committee feedback)
- Course Efficiency rates for all three semesters
- Reflections on last year
- Analysis/Justification of this year’s action plan

On the right side of the A3 is the Action Plan (the future state of the program). It includes:

- This Year’s Action Plan
- Follow-up and Unresolved Issues
- Budget Implications

As a result of this pilot project, the A3 continues to be in use and has expanded to other programs and services of the college. Faculty and staff have been trained in the use of the new planning tool and have developed specific program level outcomes that are learner focused and measureable. The Plan-Do-Check-Act cycle was at the core of the implementation project. The September 11, 2009, AQIP feedback report (NMC, 2009)

endorsed Northwestern Michigan College's "excellent pilot plan; It brings together community and faculty advisors, and emphasizes five program review areas that include an appropriate set of diverse programs" (p. 2).

The success of this work is credited to the support from administration in the development of this tool with the dedicated administrative assistance from the Office of Research, Planning, and Effectiveness and a facilitator to assist in project planning. The team used lean concepts, tools, and design to implement the new program review process. Since this inception, the "ownership" of program review is with the divisional chairs. A key administrator confirmed that the Office of Research, Planning, and Effectiveness provides the tools, the data, and the coordination, but it is not the driver; it is the president who confirms a decentralized process, primarily a "bottom-up approach": "our role is the tread, like on a tank. We are the tread. We are just trying to keep it moving" (NMC2). What was once an every-three-year project is now reviewed each year and is considered by administrative staff to be working to achieve its purpose.

*Integration.* In 2010, the HLC wrote in their Systems Feedback Executive Summary (NMC, 2010) that

NMC is well on its way to becoming a quality-driven institution as evidenced by performance results that are leading to changes and improvements in student learning. The use of standard improvement processes for all areas such as the new decision-making process, implementation of lean tools, A3 and catchball, use of AQIP action planning related to learning, and favorable benchmarked results for learning are all indicators that NMC is by intent and practice an organization meeting its mission to deliver effective lifelong learning. (p. 1)

The HLC recognized the value of the work that had been done with the A3, NMC's program review tool. HLC also noted, however, under Category 7P6: Measuring Effectiveness that: "NMC does not have a process for ensuring that departmental

analyses of data align with institutional goals, which is critical for ensuring goal attainment by all units of the College” (p. 32). Measuring Effectiveness examines how an institution collects, analyzes, and uses information to manage itself and to drive performance improvement. These comments were instrumental in driving the most recent AQIP Project.

*Implications and change.* Since that report, NMC has been steadily committed to improving this process improvement measure and submitted a three-year AQIP Project, The Aligned Planning Processes, in early 2011 to undertake changes to its strategic planning and institutional effectiveness processes and measures. One administrator remembered the impact of the feedback from HLC,

We got a lot of feedback from the Higher Learning Commission on that section on our processes related to that. That wasn't the only impetus to really take a look at a more aligned planning process, but it certainly was a catalyst to help just get it going, get it put in place. What occurred was continue to utilize the A3 in their planning processes. What the academic areas had to do with program review, they were ahead. They were ahead when we got to this aligned planning process (NMC2).

The use of lean tools was important to the success of the integration project and was championed by a director in NMC's training unit, who was familiar with the tools. The Executive Director of the Office of Research, Planning, and Effectiveness Director also received lean champion certification. The use of lean and other business models is not generally favored by faculty (Alfred et al., 2009; Bresciani, 2006) and this was consistent at NMC. “Lean wasn't the flavor of the day. It wasn't an institutional roll out. It was more ninja like!” (NMC2).

Despite this initial hesitancy and low-key adoption strategy, NMC's experience has proven successful in its integration into its culture, not only in its process, but also

with acceptance from faculty and staff. While faculty were not interviewed for this study, a recommendation for future research, several administrators commented on their perceptions. When discussing program review as part of strategic planning, one administrator confirmed,

In a way, that program review is driven by planning and initially it was, but clearly what happened is that each area became more, I don't know if I would say, self-reliant, but it became more involved in really seeing that planning was important and program review was important and that those two things are linked. You plan, you do, check, adjust. That really is what we are doing with program review (NMC3).

Hom (2011) comments that faculty roles on cross-college teams are very important during which time team members emphasize institutional-wide success and interdependence of the sub-units. While they may not result in consensus, they do provide a greater understanding of what institutional effectiveness means that “may become broad enough to create convergence of perceptions” (Hom, 2011, p. 99). One administrator added when reflecting back on the old processes, “An important distinction for us, we could report and file or we could report and act. We shifted a bit more toward the acting part” (NMC3).

*Areas of improvement.* Two components of these models and processes, (1) the NMC framework of student success for data collection—what data are important to collect, and (2) the program resource needs, are progressing. NMC has proven its diligence in providing program data; however, they are committed to four levels of outcomes based on Kirkpatrick's model as part of this framework. The four levels are: (1) the student level—the course; (2) the program level—program outcomes; (3) student's ability level—the student's transferability of skills and competencies, and (4) the employer's level—does the student, now employee, have the appropriate skills

and competencies, and how are they sufficient? One administrator commented on the need for a deeper level of data:

I think we understand the level of data that we have, but I think there is an opportunity to dig deeper into the data . . . I think it will come in time when we are able to move from the program level to more of an individual level. We are not quite there yet. (NMC1)

Another administrator in regard to the use of data confirmed this sentiment:

Where we are comfortable with the data, where we are comfortable with the analysis, it is very clear where it is going to plug in. It is not yet breathing. We have some good opportunities with professional development to help folks understand better as they look at their information, what their next step is. (NMC3)

The second area of need is the challenge faced by program review requests and limited resources. There is work to be done on creating connections with program review to current resources or determining new funding models. Bers (2011) endorses the concern: “Expectations set for program reviews, process and product, must align with resources available for conducting the review and other commitments of key personnel” (p. 72). NMC has utilized program review previously to analyze costs for expensive programs—Aviation, Maritime, and Nursing—resulting in new tuition structures, representing one example of using program review to develop a new programmatic business model.

The cost-to-educate model updated annually is also tied to the program review process. As fluctuating program revenue and increased costs are examined, the task of examining programs to improve efficiencies is most important. NMC in the summer of 2012 determined that any program generating net revenue of \$10,000 or below for the last 3-4 years “may want to look at some efficiencies, change how we deliver the program, or is there a differential tuition model that we can establish with that?”

(NMC4). This reality is offset with concern for continuing to increase tuition. “You know you can’t set a differential tuition model that is going to push them out of the market either. We need to look at all angles of that” (NMC3). Four programs are being examined: Automotive Technology, Dental Assisting, Nursing, and Culinary. These programs are typically expensive at all community colleges and new funding models will be worth noting.

**Central Piedmont Community College.** CPCC’s analysis of program costs is called the Program Cost Study. Their study and academic program review are two of the core components of their institutional effectiveness efforts. Each process and model is discussed in-depth below based on the same five categories of the on-site interview questions: (1) history, (2) context, (3) implications and change, (4) areas of improvement, and (5) impact on the college and the students using narrative from the interviews and the data collection. This section concludes with a description of how CPCC is integrating these processes into their strategic planning efforts. (CPCC’s Program Cost Study and a sample program review are in Appendix K and L).

***Program cost study.*** CPCC’s Program Cost Model has recently received considerable attention at national conferences (Association of Institutional Research, 2009; League for Innovation, 2011; Achieving the Dream, 2012; and Society for College and university Planning, 2013) and in publications, as it is an example of how a community college has created and improved upon a financial tool that is both accurate and useful for both administrators and faculty to understand program costs first and then to act to create efficiencies.



*History.* The Executive Vice President brought the idea of the program cost study to CPCC from her previous work at another North Carolina community college. Prior to this, CPCC did not have a programmatic cost model. One administrator explained, “We never had any kind of reasoned out way to look at costs within a program area or department area or anything before” (CPCC3). The work began in CPCC’s budget department and then it was moved in 2004 to Institutional Planning and Research for their analysis. Both of these areas of the college reported to the Executive Vice President. By creating a program or budget code for each content area, the new model examined actual costs by course, not FTE, which is how CPCC is reimbursed. Students do not pay by FTE; they pay by credit hour and therefore the model was developed to create a tool that would be understood by academic faculty and staff, rather than just the business office.

Once Institutional Research and Planning completed the analysis of the actual costs, the compilation of data on courses and their associated costs was given to the Executive Assistant to the Vice President for Learning. Revenue from tuition was later added to the model “as studying a return on investment for our programs and our portfolio” (CPCC4). Using a variation of the Boston Consulting Group Growth Matrix, the programs were distributed based on a quadrant of high cost/high enrollment, high cost/low enrollment, low cost/high enrollment, and low cost/low enrollment using two-year trend data. The deans at CPCC reviewed the information “to make sure they had a handle on the situation, to explain why the costs of the program were so high, was it an accreditation cap or enrollment?” (CPCC4). The model included enrollment and completion rates to provide further detail to CPCC and its stakeholders of the return on

investment for its programs. The first cost study was fully utilized in 2006 and has been repeated every two years since then. This year is an exception when they will not undertake the cost study due to preparation for their SACS accreditation site visit.

*Context.* Dr. Zeiss, president of CPCC, asked for this work in 2002 as result of an earlier recession that challenged the open-access mission of CPCC. He asked his vice presidents for “the cost and value of every program” (Anderson, DeCamillis, Hert, & Karazim, n.d.) in order to assess services and programs to better serve their students.

CPCC’s most recent program cost study was completed in Fall 2011 (Appendix K). As a result, 68% of the programs generated a return on investment in 2009-2010 and 75% of the programs grew in FTE in two years. The programs were mapped into one of the four categories resulting in:

1. High Demand/Low Cost Programs (43 or 50%)
2. High Demand/High Cost Programs (21 or 25%)
3. Low Demand/Low Cost Programs (15 or 18%)
4. Low Demand/High Cost Programs (6 or 7%)

This tool was used by Dr. Zeiss and his administration, including the Advancement Office, to request from external sources “seed money” for two new programs, Pharmacy Tech and Occupational Therapy Assistant, due to the high cost of health care program implementation.

As a result of the development of the model, the program cost study has also been used in grants to show the return on investment of its programs resulting in an approximate success rate of 86% from grant funds and private foundations.

Their success with this model and the entrepreneurial culture of CPCC is evident.

One administrator stated,

The State is covering less than 50% of our operating expenses. CPCC has not suffered as a result because we are able to get all of this external money. We really have not suffered. We are continuing to hire, we are continuing to grow, and we are continuing to build buildings. That is the good news. (CPCC4)

*Implications and change.* Despite this work, Dr. Zeiss and his administrators understood that certain programs would not be reduced or cut due to their high costs as they were primarily focused in health areas and were important to the community. Dr. Zeiss used the information from the cost model that now included tuition revenue, direct costs and a percentage of administrative costs, approximately 3%, to share with business leaders in the county. “We kind of bundled all of this information and turned it into a fundraising campaign. So instead of threatening to eliminate or terminate programs, we chose to help subsidize the programs.” Dr. Zeiss developed new fundraising strategies that appealed to area hospitals and laboratories to share the costs of training their workforce. His focus on increasing the entrepreneurial efforts of the college to fund programs was assisted by the transparency and data-driven program cost model.

*Areas of improvement.* The program cost model has not been updated since 2011 and is not included in program review. This plan was intentional on the part of CPCC due to their pending 2013 SACS accreditation process. The program review process had been implemented and it was decided to not include new sections prior to the accreditation visit in order to show consistency of the documentation and model across several years (CPCC4).

All programs have not been analyzed in the program cost model. This is planned for the next stage of this model in 2014. The first time the model was completed, 67

programs were studied. The 2011 model includes 79 programs and academic divisional offices.

***Program review. History.*** In 1995, Richard L. Alfred and Patricia Carter served as consultants to CPCC in order to improve strategic planning efforts. They submitted their recommendations in *Building the Future: Comprehensive Educational Master Planning Report 1995-2005*. Three recommendations were central to this study: (1) to examine all curriculum programs with low enrollment and determine how they could be revitalized or enhanced; (2) revisit the Academic Review Process by “bringing more utility to the process” and reduce the time between reviews; and (3) “develop a simple, integrated planning, assessment, and budgeting system, which can be continuously and systematically used to monitor and improve programs and services” (p. 11).

Since 1995 and again in 1998, CPCC has been improving upon their model of program review from what was previously described as a “terrible academic exercise” (CPCC3). They have continued to improve their program review process, which resulted, in 2002, in the SACS visit in which they gladly received no recommendations in institutional effectiveness. CPCC completed their SACS submittal in preparation for their on-site visit, which was scheduled for September 23-26, 2013.

***Context.*** The program review model that CPCC now uses is a “standardized program review” due to its mostly quantitative content (Bers, 2011). Its stated purpose is “to make sure that course content and methodology are meeting the needs of both students and the community” (Detailed Outline of Academic Program Review, n.d.-d). It is a requirement of the North Carolina Colleges and is listed as a State Board Code, 1B SBCCC 400.98:

Each college shall monitor the quality and viability of all its programs and services. Each curriculum program, each program area within continuing education, including Basic Skills, occupational extension, and community service, and each service area shall be reviewed at least every five years to determine program strengths and weaknesses and to identify areas for program improvement. The program review process shall be consistent with the requirements of the regional accrediting agency.

In addition to the required 12 quantitative measures required by the State including pass rates, goal completion, employment status of graduates, degrees/certificates, and enrollment trends, CPCC's program review, according to the instructions, must also address new SACS Core Requirements and Comprehensive Standards. SACS Core Requirement 2.3 states:

The institution engages in ongoing, integrated, and institution-wide research-based planning and evaluation processes that 1) incorporate a systematic review of institutional mission, goals, and outcomes; 2) result in continuing improvement in institutional quality; and 3) demonstrate that the institution is effectively accomplishing its mission (Institutional Effectiveness).

Directions clearly state, "All units must link to the college's mission."

The Program Review Process also includes input from students and employers. Focus groups using a SWOT analysis are arranged and conducted by the Program Review Director to solicit feedback on a timely basis. The use of the focus group feedback adds to the credibility and transparency of CPCC's program review process.

The Program Review cycle at CPCC is every five years for academic programs, according to North Carolina State Board Code, with an annual "follow-up" meeting. In 2011, CPCC changed the follow-up cycle of the review to a mid-cycle review. The Vice President of Academic Affairs meets with each program at least twice during the process. When they initially submit the program review, the vice president, the program chair, dean, and division director convene to discuss their report, including the resources they

need to achieve and improve their program and student outcomes. One administrator reported describing the role of the faculty and the vice president in this process: “Every one of them gets up and they do a walk down through of what we said we were going to change. It is very pleasant. Our frontline folks are listened to by the Vice President” (CPCC7). Service units at CPCC are reviewed every three years.

CPCC’s Program Review process is managed from the Office of Institutional Research and coordinated by the Director of Institutional Effectiveness, a full-time position. This person serves as the co-chair of CPCC’s Institutional Effectiveness Committee, of which Program Review is a sub-committee. The Institutional Effectiveness Committee was formed at the request of the College Cabinet in 1999 in order to advise and monitor capacity for the College. The Associate Vice President of Learning is the other co-chair and provides leadership from the academic or learning unit. The Director manages the process; however, it is supported and led by faculty. One administrator, a dean, stated, “If you ask today, whom it is that basically owns the program review? It is a ‘we’ proposition” (CPCC7).

*Integration.* The current processes of program review and the program cost study inform the budget planning processes at CPCC. Reports from several administrators discussed the positive impact from the Vice President for Learning’s relationship with faculty and staff and his follow-through on providing appropriate resources. One administrator commented,

Basically, he gets right down to the crux of the matter, which is how are things going? What can I do to help? What do you need? Then it does get factored into the budget process. That has been an important loop that has been closed. (CPCC4)

The program cost study results have also resulted in major fundraising and corporate sponsorships, which have been instrumental in creating new programs and sustaining others. One administrator expressed the hope that the program cost model could also serve to inform the State as well of program costs to increase the FTE reimbursement rate particularly for high-cost occupational programs.

If we could better utilize that, not only with corporate partners and donors, but with the State and the funding relationship to say, well, you know there is a critical need for these kinds of folks but this is a gap in the funding even when we have high enrollments in that area. (CPCC1)

Integration of the program review and program cost study with the strategic planning process received mixed opinions from administrators. One administrator stated, when asked if there was additional work for the future on integration of the program review process with strategic planning, “I think it is always evolving, that we learn to do things better. I think that this college does a remarkably good job of pulling in past and present data, future plans, and looking at the big picture” (CPCC8).

Another administrator discussed the need to include national initiatives such as Achieving the Dream (AtD) into the program review process given the work that is occurring throughout the college on student success.

For instance, while a lot of data is included in program reviews, it would be helpful to present the data in a different way, in more of a graphical format. This lines up with our efforts to become a more data-driven culture. (CPCC4)

She also expressed her optimism for the future for program review as well as strategic planning:

The strategic planning process here is not currently integrated and I have great hopes for when this 2009-2014 Strategic Plan is up. But, the same could be said for program review. Right now, it is just about a program in and of itself without any real integration with other programs, sharing of resources, or with college-wide strategic planning. (CPCC4)

*Implications and change.* CPCC's SACS accreditation cycle is 10 years with the next visit in 2013. Since 10 years ago, CPCC has maintained its program review process consistently. As one administrator stated in describing the process despite the long gap between accreditation visits, that a sense of urgency is critical to the success of the program review process, "What is urgent is the last 2-3 years before accreditation, but we have kept it going for 12 to 13 years now" (CPCC3).

The Program Review process, a five-year process, was changed in 2011 to include a midpoint review at two and a half years instead of an annual review. They had initiated a yearly review update process, but have implemented this new midpoint due to the high volume of reporting requirements and to allow adequate time for analysis and assessment of program and student outcomes.

The program review is submitted electronically, which is a new process for CPCC, using Compliance Assist software. The Institutional Effectiveness committee reported the need to follow up with faculty to determine their satisfaction with the product (CPCC, 2012f, p. 2).

*Areas of improvement.* The program cost study results are not currently in the program review, but there is a hope that it will be incorporated after the SACS site visit in 2013. The Institutional Effectiveness Committee 2011-2012 report noted the challenges of their work in two areas: (1) "Capturing and communicating the many goals of Institutional Effectiveness in an effective and memorable way," and (2) "Helping the College as a whole understand that everything we do—across all departments—should be designed to positively impact our students and help them achieve specific outcomes the College has set forth" (p. 7). Minutes from the College Senate of January 15, 2013



(CPCC, 2013) noted that a SACS representative in a pre-site visit in December 2012 indicated that the SACS review team would be focused on institutional effectiveness and that it might be an area of “vulnerability” (p. 1). Institutional research and planning has been actively involved in documenting and clarifying the internal processes of CPCC in this area. The Institutional Effectiveness December 2012 minutes (CPCC, 2012f) reported this pre-visit but did not indicate specific areas of focus or concern.

**Summary.** Each of the two colleges has developed program cost or cost-to-educate models and program review processes. The program cost/cost-to-educate models have assisted faculty and staff by increasing their awareness and understanding of the costs of the academic programs at their colleges. Administrators report increased use of data by both faculty and staff, greater linkages of program review to budget planning, innovative program funding and tuition models, and enhanced collaboration and communication between administration and staff.

### **Cross Case Analysis**

It was central to this study to determine the components of program review and program cost/cost-to-educate models that two colleges were using and how each college had integrated their program cost/cost-to-educate models with their program review processes. These models’ successes and the challenges, which both colleges encountered in their efforts to improve college efficiencies and effectiveness, will be discussed based on the following consistent perspectives and themes: (1) economic and accountability pressures, (2) use of a quadrant model, (3) lean and standardized models, (4) assimilation and trust of data, (5) adaptable tuition and delivery structures, (6) resource allocation and

fundraising, (7) faculty and staff collaboration and utilization, (8) strategic planning integration, and (9) avoidance of program elimination.

**Economic and accountability pressures.** Both NMC and CPCC developed new program cost and cost-to-educate models driven by their presidents and administrators as a result of the severity of the financial predictions and increased pressure for accountability in or for the future of their colleges. Dr. Tony Zeiss, president of CPCC, stated in an interview in April 2012,

We've got greater pressure from state and federal entities on accountability...they are funding less but making us more accountable. . . . Program costing is becoming, you will hear more and more about it; colleges didn't use to do it, but several years ago I told my VP's I want to see the cost and the value of every program. (Anderson et al., n.d.)

One NMC administrator commented that, when asked what drove the changes to create new cost models,

I'd like to say that it was strictly an effort to make improvements, but we were in serious financial shape with our state [Michigan] and so a large part of our focus was on trying to look at financial re-allocation of resources. (NMC1)

**Quadrant approach and data driven.** As a result of the challenging economic conditions in the early 2000s, administrators began the analysis of program costs. Both colleges, CPCC and NMC, then developed models based on quadrants of high or low cost and high or low enrollment demand programs. The goal at each college was similar. It was to create a balanced portfolio of programs based primarily on high demand/low cost programs to offset those programs determined by each college to be high demand/high cost and to eliminate low demand/high cost programs.

CPCC's quadrant model, developed five years ago, is still being used today and will continue to be improved, according to several administrators. Revenues generated

from tuition and fees and expenses including faculty salaries and classroom supplies are a part of the model. Administrative costs are currently allocated at 3% across programs. Previously, at both colleges, only direct costs were included. Each college chose to include revenue in the new models in their efforts to present a balanced approach to faculty and administration, which now more accurately reflected the overall impact of a program's enrollment with its direct costs.

Through a collaborative process of several months and over the next several years, the quadrant model at CPCC was created, resulting in faculty and staff becoming keenly aware of their programs' costs. According to a key CPCC administrator, it was faculty who were to be commended for improving efficiencies by increasing class size and sections and working toward greater accuracy of cost allocations by program. These changes were a direct result of their understanding of the program cost model and its impact on the college and on students.

NMC, however, discontinued the quadrant model in the early 2000s due to the concern that programs that did not fall above "the line" would be eliminated and so would the faculty and staff associated with them. It put people in a vulnerable position and, at that time, NMC's leadership chose not pursue this method as "that would have been a major cultural shift for the college, one that we were not prepared to make" (NMC1). What resulted was their new cost-to-educate model that does not include quadrants but displays direct costs of programs over a two-year period of time presented on a bar graph that shows program costs per contact hour. This model first developed on paper is now available electronically and updated each semester.

Each college has developed and evolved their models based on direct costs and tuition and fee revenues to be utilized by faculty and staff in program planning and resource considerations. These models are revised every one to two years by each college's financial services office and coordinated with the academic administration at both colleges.

Previously program costs had been viewed as a college-wide responsibility at both colleges and were not necessarily considered a program's concern. Data that informed the program cost models were reviewed and analyzed by academic administration first and then with faculty to arrive at shared understanding of the data. As one administrator commented,

Of course, the first reaction was the data was incorrect. This can't be right. What resulted at both colleges was an opportunity to say, "That may be true, let's sit down and see what we can find" and discuss the data more deeply together. (CPCC1)

One CPCC administrator added emphatically, "We really, really, really had to take the threat out of it in order to have a meaningful discussion about the data" (CPCC4). Another NMC administrator confirmed the sentiment of trust and collaboration: "One of the things I have stressed with people is this isn't about punishment and it is not about trying to catch them on a bad day. It's about what we do together" (NMC1). This collaborative and patient approach proved effective for both colleges.

**Adaptable tuition and delivery structures.** Northwestern Michigan College developed new tuition models for two of its high-cost programs, Aviation and Construction, which resulted in their first differential tuition model. This model now includes the Maritime Academy program and according to NMC's chief financial officer,

Nursing and Culinary are being considered. At the December 17, 2012, Board of Trustees meeting, one of the board members commented favorably on the demand for the Aviation and Maritime programs, indicating steady enrollment and at a tuition price that is still affordable to students.

The program cost models, while based on different state and local revenue structures, have provided accurate, detailed, and real-time programmatic costs for administrative and program decision making. Both colleges have also developed new business strategies for their high-cost programs. “We really knew we had to get down to the business of the program and the fundamental program . . . how do we position it financially so it is at its best condition?” Adaptable tuition structures have occurred at both colleges with credit and non-credit programs. Each college structures their funding models differently. At CPCC, the credit programs are referred to as “curriculum,” “OE” or Occupational Extension, and non-credit. Within OE, programs may be supported by FTE or they must be self-supporting. They are being driven at a state level by tiered funding. Occupational programs that lead to jobs are paid at a higher FTE funding formula than English, for example. Their Nursing Aid Certificate has recently moved to a curriculum model as it is likely based on enrollment to garner a higher FTE reimbursement rate than if it stayed as OE.

At NMC, their funding model is described as Portfolio A and Portfolio B. Portfolio A holds the general fund programs and services and Portfolio B will hold those programs “that have the capacity to respond to its pricing models and its finance models, closer to market than to the regulated environment of higher education” (NMC3). Both of the models offer each college the ability to be flexible, agile, and adaptable to the

changing funding needs of the college and enrollment fluctuations of its students. One NMC administrator admitted, “We do have much more hard work to do in building models that fit that the new paradigm” (NMC3).

**Standardized versus lean models.** NMC’s and CPCC’s program review processes were created to meet regional accreditation requirements: HLC/NCA for NMC and SACS/COC for CPCC. Additionally, CPCC is required by the State of North Carolina to complete a program review that includes its seven accountability measures. NMC is not required to submit its program reviews to the State of Michigan, except as a component of occupational program review. Their A3 now serves these multiple purposes.

While CPCC and NMC’s cost models are similar, the difference in the program review models between the two colleges is distinct. One is a standardized qualitative program review with multiple pages of narrative and programmatic data; the other is a one- to two-page document, a lean business tool, with data categories directly linked to its college strategic planning goals. CPCC’s program review cycle is once every five years as required by the state and a new mid-year review at two and a half years. NMC does annual reviews.

Both colleges have created program review models based on their institutional needs and culture. The program review models vary substantially for each college; however, each college has benefitted from their respective models. Neither college has included program costs into their program review processes; they remain two different processes. The program cost models do inform the budgeting processes at both colleges and are linked to strategic plans.

Administration provides the oversight; however, each college has a cross-college team that includes program review as part of its key institutional effectiveness and planning work. For NMC, it is the Planning and Budget Council, and at CPCC it is the Institutional Effectiveness Committee.

**Limited resource allocation and new fundraising strategies.** Resources requested from program reviews were allocated in many cases, but not all. NMC discussed the concern that program reviews have historically requested more full-time positions than the college's budget can accommodate. Last year, 82 new positions were identified as being needed for the future! Tim Nelson spoke to this issue at the Leadership Group meeting in November 2012 that the researcher attended: "We have to get better at knowing we don't have unlimited funds."

Fundraising was a particularly effective strategy at CPCC. Since programs were not eliminated as a result of program review, the issue of cost remained. What occurred was each college, led by its chief financial officer and the president, created new fundraising approaches and tuition structures to offset the programmatic costs. When speaking about the value of program review, one administrator stated, "We don't ever use it to terminate programs, but we use it to fundraise and to strengthen and combine certain functions so it costs less" (CPCC3). As a result, several of the programs have enhanced their effectiveness and moved into different quadrants. Central Piedmont Community College has also chosen to improve program quality by consolidating some of the programs into "umbrella degrees."

**Faculty and staff collaboration and utilization.** Both colleges arrived at models that, based on administrators' perspectives, are used by faculty. One NMC administrator

confirmed, “ It wasn’t put on a shelf . . . It is all out there for everyone to see and, you know, questions are asked, where did you get this or how do you calculate this and it is all very up front and not a guessing game for people to figure out” (NMC5).

The practicality and the transparency of the models are evident from the reactions of faculty and administrators. The cost models have also benefited deans, as some of the programs at CPCC, for example, have shifted into the high-demand areas. One CPCC administrator commented when describing where her programs were distributed after the most recent 2011 cost study,

I was delighted on the latest one that virtually all of my programs, they may have been high cost, but they are also high demand. We are no longer in the high cost, low demand corner. What you want to do is move to the top half of the page.  
(CPCC8)

Each college’s administrators spoke to the collaborative nature of the development and implementation of the processes. Each chief academic officer, the vice president and the provost, at each institution commented on the importance of the program review for their colleges:

These program reviews when I started here, I was part of program review and it was good. It was, however, sitting in your office in a shell and nothing happened. That was the perception. I said, well, we have to undo that. In these times, we have to use it and we have to build it into our budget.

The other commented on the value of the A3 systemically:

The program review is kind of at the heart of planning because if you take it at the college-wide level, again, we have the strategic planning and part of the strategic plan is a result of things that come upward, and partly it is identified at the strategic level that then need to translate downward. Program review is that kind of core planning. That is where it happens.

Faculty and staff have been very involved in the process and planning of their review processes. Multiple administrators spoke to the issue of ownership and that the



processes lie with the faculty. “It is something we take very seriously and I guess what I respect about it is that faculty are driving it and so I feel that it has integrity and you want to listen” (CPCC7).

Administrators spoke to the value placed on the process by the chief academic officers not only as a planning tool, but also as a demonstration of collaborative leadership. Several deans discussed the engagement of the chief academic officer in the process and expressed how much the faculty appreciated his involvement and the follow up to their requests.

**Program elimination.** NMC and CPCC did not eliminate programs despite the creation of their new models. As programs were not eliminated, neither were faculty positions. The highest cost, over 65% and more, of any college budget is typically its staff and faculty. Yet in the process of developing program cost models, both colleges reported that no staff were terminated. Dickeson (2010) confirms, “Although it is possible to retrain faculty in some disciplines for the purpose of internal relocation to positions where demand might be greater, the occurrence of such shifts is rare” (p. 22). Faculty positions have been eliminated due to retirements. After engaging local employers and their advisory committees, each college has closed programs upon the retirement of program faculty as a way to reduce costs. This approach to not eliminate positions was concerning. One NMC administrator reflected when questioning what approaches may be different in the future, “The question is, as the scene of higher education changes, will we be able to do it in this manner or will we have to accelerate it because we cannot afford to wait?” (NMC1).

**Strategic planning integration.** NMC's accreditation process has driven dramatic changes to its institutional effectiveness efforts. The program review process is well integrated into NMC's quality improvement strategies of its strategic plan as evidenced by the AQIP/System Portfolio feedback and the President's Annual Review, "Campus wide implementation of the A3 documents has provided a wealth of data for future execution of the [Strategic] plan" (NMC President's Annual Review, p. 25). Each program review links its goals directly to the strategic initiatives. NMC will continue to address the financial impact of resource requests from program reviews on its budget development processes.

CPCC clearly states that the program review should be linked to the mission of the college; however, it was not clear to the researcher what the requirements are for faculty to link their plans to the overall college's strategic plan or how the strategic planning team utilizes the program review information. One administrator described how the strategic planning process is clearly focused on student success, an area that they have been focused on since 2007. Another administrator emphasized,

Our primary objective is student success as a college. We embrace that. When we undertake some of these more difficult analyses, it is always with the idea of how can we improve? In any type of planning or implementation or change you have to be prepared to do that. (CPCC1)

In CPCC's accreditation visit in 2013 there should be a determination of whether its program review process is effective once again and if further integration of program review and program cost studies are required.

Both colleges will continue to improve their alignment of program review and program cost model data with their strategic planning efforts to fully integrate these processes into the colleges' systemic processes. The culture of each college and its

organizational structure will impact this integration (Bers, 2011). “A well informed IE committee, given the charge and complete support of the president,” Bers writes, “can garner greater participation from across the college. Institutional effectiveness committees can be large or small and can serve as the umbrella or oversight group for all work related to student learning, outcomes, strategic planning, and program and unit review” (p. 17).

## **Finding 2**

*A majority of the respondents at both colleges indicated that key components that led to successful integration were (1) transparent and available data, (2) full utilization of the models by faculty and staff, (3) development of new funding models, and (4) greater responsiveness to internal and external stakeholder needs.*

**Northwestern Michigan College.** The primary and overriding finding of this study is that the five key administrators viewed the changes in the processes and models to have an overwhelmingly positive impact at NMC. Table 3 shows the categories of efficiencies and effectiveness in order of the area of most impact to least impact as reported in the interviews based on the literature that are driving improvements in these areas at community colleges. The majority of the respondents in all areas except one indicated that there have been significant improvements in both efficiencies and effectiveness at NMC. CPCC’s ranking of the changes in the processes is included following the section on NMC.

Table 3

*Northwestern Michigan College: Program Cost-to-Educate and Program Review Efficiencies and Effectiveness by Percentage of Respondents*

Percentage of NMC Participants, N= 5	Coding Schema: Efficiencies	Brief Description
100%	EFC 5	New or revised processes
80%	EFC4	Responsiveness
70%	EFC3	New funding sources
60%	EFC1	Repurposing of budgets and tuition rates
60%	EFC2	Consolidation/Creation of academic programs
20%	EFC 6	Productivity
Percentage of NMC Participants N= 5	Effectiveness	Brief Description
100%	EFF1	Data utilization
100%	EFF3	Practicality for staff and faculty
100%	EFF 4	Transparency
80%	EFF2	Accountability
80%	EFF6	Enhanced performance
60%	EFF5	Value

***Efficiencies.*** All five administrators, or 100%, described evidence of changes to internal processes (EFC5) resulting in the further streamlining and improvement of programs. An example of a process that NMC continues to improve is its dashboard of Course Efficiency Ratings. This website-accessible document gives an up-to-date picture of the courses in demand by students and is available to both internal and external

stakeholders to examine. This auxiliary process is important as it augments the A3, NMC's program review process, with the most recent and accurate information.

The cost-to-educate and the program review processes are also continuing to be refined. One NMC participant commented on the use of A3:

It has totally turned our planning into a different process. We have revised and revamped how we collect data, what we do with it, how we report it, how it rolls up into our strategic directions. It is a whole institutional process now instead of just a few pockets of reporting some data that no one saw or understood. (NMC5)

Sixty percent of the NMC administrators spoke to positive impact on consolidation of programs (EFC2). The cost-to-educate model has resulted in the repurposing of budgets and the creation of new or revised programs. An administrator commented on the repurposing of budgets:

It started with Tim's expectation that we be able to communicate the cost-to-educate. How much are these programs? How are they doing individually so that we fix an overall budget instead of just raising tuition but to look at each individual program? (NMC4)

Another example has been the change in the Aviation program. The new leadership has been credited in that area with "completely turning that program around" (NMC1). Another example of program change resulted this year. A recent Board of Trustees meeting (2012) confirmed the elimination of NMC's Advanced Manufacturing program and the shift to increased emphasis on engineering, resulting in a new Engineering Technology degree for occupational jobs as well as transfer to 4-year institutions. The decision to make these changes occurred as a result of the cost-to-educate and program review data with input from local and regional employers as well as the retirement of program faculty.

Additionally, 80% of the participants indicated that responsiveness (EFC 4), resulting in the college's ability to change processes and curriculum to meet internal and external stakeholder demands, had improved. NMC's Board, in their June 2011 evaluation of the president, commended NMC in the area of responsiveness: "Tim has the ability not only to identify and address problems, but also to adjust on the fly in an ever-changing landscape" (p. 29).

One topic, productivity (EFC6), proved to be an element that was not as strongly evident from the coding of the information. The researcher used the definition from the Social Program Evaluators and Consultants (2011, p. 1), which determined that community college productivity is defined by the educational resources used (the numerator) divided by the number of graduates or numbers of degrees (the denominator). The lack of the presence of this element may be an indication of the two separate components of NMC's process, which are still strongly connected but not defined solely as productivity: program review does include the results on degrees and graduates based on Carl D. Perkins core indicators and the cost-to-educate model contains the educational resources used against revenues generated. This observation may also reflect the researcher's lack of mutual exclusiveness in the definition and use of the terms. NMC is committed to productivity given its AQIP project on student completion, its innovative work in program review, and its transparent and mindful process of the cost-to-educate model. It should be noted that when asked about the impact of A3 and the cost-to-educate model on enhancing the college's and the program's performance (EFF6), 80% of the administrators reported favorably. One administrator commented, "We are taking far more seriously the need to focus on the student so that we can commit to their continued

work to be successful and complete” (NMC3), thus an indicator of NMC’s drive for increased productivity.

*Effectiveness.* The lower half of Table 3 shows that 100% of administrators overwhelmingly perceived that three key elements occurred as a result of their changes in processes: (1) data utilization (EFF1), (2) practicality for staff and faculty (EFF3), and (3) transparency (EFF4).

An NMC key administrator confirmed the use of data in decision-making:

Under Tim’s presidency . . . the use of data and research have expanded during his presidency . . . that has been great value to us in making sound decisions that are widely accepted . . . people feel they have the information that they can justify the decisions that have to be made. (NMC3)

The same administrator added when speaking to the improved effectiveness as a result of the program review processes regarding data utilization and enhanced performance,

We look at classroom efficiencies and we look at all kinds of stuff, but now when we say, “I know it when I see it,” I have a matrix of information behind that that really informs what I am saying and what I am hearing and I think it has made us more conscientious about the needs of the student because now we can really pay attention to that. (NMC3)

The participants concurred unanimously that the processes have been designed to be useful to faculty and staff. It is has been viewed as critical to the success of their program review processes and supported by the literature. No longer do faculty have to prepare once-every-three-year qualitative reports and PROE. They are now are required to submit only one report. The usefulness of these models was previously noted with the finding that some divisional chairpersons keep their cost-to-educate models with them and also refer to their A3 for specific data when needing information on their programs.

Transparency (EFF4) and accountability (EFF2) are evident from one NMC administrator as a result of their change in processes and what lies ahead for the future:

“The colleges need to get to the point I think that they can explain what they have done to help the student be successful and if they aren’t successful to be able to explain why there weren’t” (NMC1). Transparency (EFF 4) of the process and the data was viewed as very important by 100% of the administrators. “It is all very up front and not a guessing game for people to figure out where the information came from” (NMC 2).

The president also validates the importance of transparency. In his 2011-2012 President’s Annual Review to the Board of Trustees (CPCC, 2012f), Mr. Nelson states, “We continue to strive for transparency and integrity. This is a non-negotiable area for the College and me and is a requirement as we enter a period of continued significant transformation. I am confident that this occurs” (p. 24). Transparency of reporting increases the college’s ability to demonstrate accountability for their key performance measures to their internal and external stakeholders that drive improvement. The Lumina Foundation Strategic Plan 2013 to 2016 (2013) confirms the need for transparent metrics as “they help to motivate the participants and generate public support, and provide valuable feedback to help adjust and modify strategies and approaches” (p. 10).

Another administrator commented,

What we have sought was to take a look at the sustainability of programs, but we are also looking at quality of the programs. Are there ways for us to improve programs to meet outcomes if we aren’t meeting them to our own satisfaction or the satisfaction of the accreditors? (NMC1)

This comment reflects NMC’s continued desire to balance the concern for cost and the creation of new tuition rates for high cost programs (EFC1) as well as for enhancing performance of programs (EFF6).

Value (EFC5) was defined in the coding as “Colleges have improved the value to internal and external stakeholders as defined by program quality, job placement,



graduation rates, affordable tuition, and increased learning competencies for students.”

Sixty percent of NMC’s administrators reported that this was evident as a result of their work in program review, A3, and the cost-to-educate models. One administrator confirmed a viewpoint on the “value” of these processes:

The benefit to the student is learning in a program that can adapt to industry’s changing needs and to individual learners’ changing needs. The only way the program can do that is if it understands where it is. I think that is the benefit to the student for having processes like this. In the end, they are better prepared to take on a job or hopefully they are better prepared and they have a love of learning and then they can do whatever else they want. (NMC2)

**Central Piedmont Community College.** The four areas of efficiencies at CPCC that occurred as a result of the processes and models that were created were (1) new and revised processes, (2) consolidation/change/creation of academic programs, (3) repurposing of budgets and tuition rates, and (4) responsiveness. CPCC also reported improvement in effectiveness with the majority indicating the following three key areas: (1) data utilization, (2) practicality for staff and faculty, and (3) value. These efficiencies and areas of improved effectiveness are listed in Table 4.

Table 4

*Central Piedmont Community College: Program Cost Study and Program Review  
Efficiencies and Effectiveness by Percentage of Respondents*

Percentage of CPCC Respondents, N=8	Code Efficiencies	Brief Description
87.5%	EFC 5	New or revised processes
75.0%	EFC2	Consolidation/change/creation of academic programs
50.0%	EFC1	Repurposing of budgets and tuition rates
50.0%	EFC4	Responsiveness
37.5%	EFC3	New funding sources
0%	EFC6	Productivity
Effectiveness		
75.0%	EFF1	Data utilization
62.5%	EFF 3	Practicality for staff and faculty
62.5%	EFF 5	Value
37.5%	EFF4	Transparency
37.5%	EFF 6	Enhanced performance
37.5%	EFF2	Accountability

The new program cost model has coincided with North Carolina's new tiered FTE reimbursement rates. Now CPCC can use the program cost model to determine which type of funding or tuition model a program or course should be using. One administrator noted the ability of the program cost model to adapt to the state funding formula:

So, now through the cost analysis, we said, well, I wonder if we would earn more if it were curriculum because the curriculum is a higher tier and through the study [program cost study] we determined we earned more FTE. Is there any harm to the student? Is there any additional time, etc.? No, it is invisible to the student so

we shifted curriculum to maximize FTE. (CPCC2)  
*Efficiencies.* Seventy-five percent, or six administrators, reported on the impact of the model on consolidation or change in academic programs (EFC2). One administrator commented on the program consolidation and the change in program approaches including marketing:

With those that are lagging, we can say, okay, are there certain strategies that we should undertake to enhance the programs, more marketing or some changes in the program delivery and help us best utilize our limited resources? This has been a great benefit for the college. We have a few instances where we have eliminated programs as a result of this, but in many instances, we have done what we're calling umbrella degrees or certificates. It helped us with enrollments a great deal and reduced overall program costs. (CPCC1)

Recently, CPCC revised its engineering programs and led the state in creating an Engineering Curriculum Enhancement program, designed to revitalize older and low-enrollment programs. With information from the program review and accompanied by the cost study model, CPCC was able to place budget and marketing funds to support these revisions (CPCC1). The impact of the cost model on the strategic plan was noted as it is "where we say we are going to look for new programs or expand programs in these areas and the program cost study is an integral part of that." (CPCC1)

Responsiveness is emphasized at CPCC. Their new program development web page affirms this factor that "encourages innovative, entrepreneurial initiatives and [that] likes to lead from the front" (CPCC, n.d.-e). Their program cost model has resulted in new funding models and the delivery of new programs, including Cytotechnology, as they are better able to manage other program revenues and costs to offset their high cost programs.

The lower percentage of administrators, 37.5%, who reported on the impact of the creation of new funding sources may be attributed to the fact that the majority of the

administrators interviewed did not represent the financial administration of the college nor were they directly connected with fundraising efforts. While they were aware of the models, they could not speak to immediate changes. Awareness of the funding strategies was well described by the executive vice presidents and vice presidents and key staff of the learning unit.

The lack of reporting on productivity by the participants reflects the researcher's previous concern on the use of the term, which may reflect a lack of clarity of definition in the coding schema. *Productivity* was not a term that was utilized in the interviews by any CPCC administrators; however, the description of the work of program review and program cost studies parallels the Lumina Foundation's definition. CPCC is strongly focused on the allocation of resources and the attainment of degrees due to long-standing work in these areas and their leadership in several national initiatives, including Achieving the Dream and Completion by Design. One administrator emphasized:

We will have to make resource decisions about what programs the students are going to want and need and where are the jobs going to be and how do we allocate resources to meet that requirement and the program cost helps us make those decisions.

This statement reinforces CPCC's commitment to productivity.

***Effectiveness.*** The majority of CPCC administrators described data utilization (EFF1) and practicality for staff and faculty (EFF3) as the most important areas of effectiveness for their program cost model. Seventy-five percent of the administrators spoke to use of the data in making decisions. Faculty trust in the process was also noted by several administrators as being pivotal to the use of the data and the eventual commitment and utilization of the cost study model. One administrator summarized:

“People have to have the confidence and trust in you if you are going to go stirring the soup!” (CPCC1). Another CPCC administrator enthusiastically reported,

What is being incorporated with the program review is much more accurate and effective based on data. Now we make much more decisions based on data (EFF2) as it relates to not just program review but also how much does any computer lab cost? Everything is based on data and that is going back to the shift in culture...of having to become more accountable. (CPCC2)

Barak and Breier (1990) confirm that key elements of an effective organizational climate for program review and resource allocation include gaining the acceptance and strong support of top decision makers and obtaining necessary resources (p. 43).

Administrative staff endorsed the program review and program cost models for the use by faculty (EFF3). One dean summarized the usefulness of the tools for her faculty and her students: “What makes them [students] successful makes my faculty happy and gives me enough resources without having to say, ‘I’m sorry,’ we cannot afford that. That is what I want” (CPCC8).

Value (EFF5) was defined in the coding schema, based on the literature, as “Colleges have improved the value to internal and external stakeholders as defined by program quality, job placement, graduation rates, affordable tuition, and increased learning competencies for students. Faculty value processes and tools to improve program quality and access to resources.” Five administrators, or 62.5%, reported that the program cost study had value. One administrator noted,

We followed closely labor market data about jobs and the discussion of skills gaps, etc., to try to do our program analysis. It also has an impact on our long-range capital plan. We just completed an updated long range plan that will run for 2013 through 2017 and we start with the job growth and skills, needs, and program analysis that this program review is part of. (CPCC1)

Transparency was commented on by three administrators as very important to these processes and models, particularly in the choice and use of data. One CPCC administrator explained the need to review and re-review the data with staff and faculty: “By sitting down together to analyze the data to determine if there are errors and then arriving at a mutual understanding and validation of the data was critical to the success and transparency of the process.” She stressed,

Once we were open to that, you have to be transparent and avoid the fear factor, so to speak, in that kind of analysis. Those were the important things we shared and helped people to understand both its purpose and its meaning. (CPCC1)

Three participants, or 37.5% of the CPCC administrators, reported that Enhanced Performance (EFF6) and Accountability (EFF1) were important to the development and implementation of the program cost study. Enhanced performance was defined as “Colleges and programs have improved their performance based on performance indicators that include increased completion rates, programmatic assessments, reduced costs, and/or employer and community engagement.” Accountability was defined as “Colleges are indicating increased pressure to improve their accountability to stakeholders on issues of costs, program success, and college performance. Stakeholders include accrediting bodies, employers, students, media, parents, and other educational partners including secondary and postsecondary institutions.”

Each of these two areas was central to the work of the program review process and directly linked to SACS, CPCC’s regional accrediting body. This point was emphasized by one dean who said, “I see program reviews as one of the most important products of IE’s work and IE helps us stay in compliance with SACS, the Southern Association of Colleges and Schools, and without that, our degrees, diplomas, and

certificates are not legitimate” (CPCC7). Two administrators stressed the importance of these processes for programmatic accreditation and looked to improve or “streamline it more” (CPCC6).

Both NMC’s and CPCC’s program cost models have led to efficiencies in new tuition models, program consolidation and revitalization, and new funding sources. Data utilization and practicality for staff and faculty were viewed as the most important outcomes of effectiveness by both colleges. Alfred (2011) emphasizes the importance of “effectiveness of valuation,” which is “the process through which stakeholders form perceptions of colleges by the results they generate and report” and cautions colleges to consider that “effectiveness is absolute and that is linked to feelings and beliefs” (p. 109). Both colleges are focused on improved effectiveness as evidenced by the changes they have made to each of their processes. This work heightens the transparency and accountability of their programs to stakeholders in order to garner the support and positive feelings of their external stakeholders.

### **Finding 3**

Communication and Community College Advocacy were rated the top competencies for current use by NMC and CPCC, respectively, in the development and integration of program cost and program review models. These competencies remained the top competencies for each college for future use. One competency, Organizational Strategy, was rated the second highest competency for future use by both NMC and CPCC.

*Research Question 5: Utilizing the current AACC competencies as a framework, what leadership competencies led to a successful integrated process?*

The AACC Leadership Competencies (2005) identify six competency areas, each with specific “illustrations” as defined by AACC. Thirty-three illustrations from each of competency areas were included in the survey that participants completed. The illustrations provided more detailed examples of specific skills, actions, and activities academic leaders might utilize in their work with program review and program cost studies. Using a Likert-type scale, participants were asked to rate specific competency illustrations from 1 (not important) to 5 (extremely important) in their role during the development of program review and program cost models at their institutions. Participants were also asked, using the same Likert-type scale, to rate the competency illustrations that they felt would be important for their roles in the future in the development and integration of program review and program cost/cost-to-educate models.

In addition to the competency questions, each administrator was asked if he was familiar with the competencies based on a scale of 1 (very familiar with them and have used them in their work), 2 (I have read them but I really haven’t used them in the context of my work), 3 (I haven’t heard of them before). Four of the participants rated that they “had not heard of the AACC competencies before.” Seven administrators rated that they “had read the AACC competencies, but they really haven’t used them in the context of their work.” Two reported that they were “very familiar” and have used the competencies in their work.

All 13 participants completed the survey, which was administered on paper. The researcher retrieved the surveys after the in-person on-site interviews or via email transmittal sent shortly after the site visits. The researcher entered ratings from the



surveys into Excel upon receipt and noted any comments. Descriptive statistics including mean, mode, standard deviation, and deviation score were used to investigate this question.

NMC rated Communication as the most important competency, not only for current use ( $m = 4.25$ ) but also for future use ( $m = 4.60$ ). CPCC rated Community College Advocacy as the most important competency for current use ( $m = 4.28$ ) and again for future use ( $m = 4.47$ ).

Table 5 indicates that the five administrators at NMC rated Communication as most important in their work currently ( $m = 4.5$ ). Table 5 also shows that the *SD* (.89) for Communication was smaller, which demonstrates how close the entire set of data is to the average value. While Organizational Strategy had the second highest rating ( $m = 4.00$ ), the *SD* indicates a wider variance of 1.10 than that of Communication at .89. For future use, NMC administrators again rated Communication highly and consistently, given the smaller *SD* of .66. NMC's rating of each competency and the increase between their current use and future use is reflected in Table 5 below. NMC also rated Organizational Strategy highly for future use ( $m = 4.43$ ).

Table 5

*Mean Score of Importance of Leadership Competencies at NMC and CPCC*

<b>NMC (N = 5)</b>				
Current Use	Mean	Median	Mode	SD
Communication	4.25	4.5	5	0.89
Organizational Strategy	4.00	4.00	5	1.10
Collaboration	3.90	4	4	0.83
Professionalism	3.58	4	3	0.95
C.C. Advocacy	3.55	4	4	1.07
Resource Management	3.53	4	4	1.12
Future Use				
Communication	4.60	5	5	0.66
Organizational Strategy	4.43	5.00	5	0.72
Collaboration	4.00	4	4	0.89
C.C. Advocacy	4.05	4	4	0.92
Professionalism	4.03	4	4	0.82
Resource Management	3.88	4	4	1.05
<b>CPCC (N = 8)</b>				
Current Use	Mean	Median	Mode	SD
C.C. Advocacy	4.28	4.5	5	0.91
Collaboration	4.16	4	4	0.75
Organizational Strategy	4.04	4	4	0.87
Communication	4.03	4	4	0.85
Professionalism	4.02	4	4	0.90
Resource Management	3.71	4	4	1.05
Future Use				
C. C. Advocacy	4.47	4.5	5	0.56
Organizational Strategy	4.40	4	5	0.64
Collaboration	4.34	4	4	0.64
Professionalism	4.34	4	5	0.77
Resource Management	4.25	5.0	5	0.99
Communication	4.25	4	4	0.83

The eight CPCC participants were similar in their rating for Community College Advocacy ( $m = 4.28$ ), with a  $SD$  of .91 for current use. While Collaboration showed the smallest variation in  $SD$  (.75), it was not rated as highly. Organizational Strategy, the second most needed competency just above Communication, was rated highly at 4.04, with the standard deviation of .87. Table 6 below indicates which competencies CPCC rated would have the greatest use for future use over current use based on the difference in deviation scores.

Table 6 illustrates through the deviation scores the increased importance of the leadership competencies in ratings from current to future use. Community College Advocacy for NMC had the highest deviation score of .50, indicating its increased value for future use by its administrators. Resource Management for CPCC, with its deviation score of .54, indicated how important that competency was rated for the future. Table 6 illustrates the difference in  $SD$ . The deviation scores were used with the  $SD$  to determine if the difference between the two means was significant. In all cases, with the exception of Community College Advocacy for CPCC, the  $SD$  scores were smaller in difference than the difference in the means, indicating that the hypothesis is supported. This difference in  $SD$  may indicate a slight perception of value amongst the 13 CPCC administrators in this one competency, despite its overall high rating.

Table 6

*Leadership Competencies – Deviation Scores of Mean and Standard Deviation by Competency for NMC and CPCC*

NMC Ratings	Current Use	Future Use		Current Use	Future Use	
Competency	Mean	Mean	Deviation Score	SD	SD	Difference in SD
C.C. Advocacy	3.55	4.05	.50	1.07	.92	.15
Professionalism	3.58	4.03	.45	0.95	.82	.13
Organizational Strategy	4.00	4.43	.43	1.10	.72	.38
Resource Management	3.53	3.88	.35	1.12	1.05	.07
Communication	4.25	4.60	.35	.89	.66	.23
Collaboration	3.90	4.00	.10	0.83	.89	.06

CPCC Ratings	Current Use	Future Use		Current Use	Future Use	
Competency	Mean	Mean	Deviation Score	SD	SD	Difference in SD
Resource Management	3.71	4.25	.54	1.05	.99	.06
Organizational Strategy	4.04	4.40	.36	0.87	.64	.23
Professionalism	4.02	4.34	.32	0.90	.77	.27
Communication	4.03	4.25	.22	0.85	.83	.03
C.C. Advocacy	4.28	4.47	.21	0.91	.56	.35*
Collaboration	4.16	4.34	.18	0.75	.64	.11

While each college rated a different leadership competency as important for current and future use, both colleges rated Organizational Strategy (NMC:  $m = 4.43$ ;

CPCC:  $m = 4.40$ ) as the second most important competency for future use. Table 6 also illustrates the deviation scores (NMC, .43 and CPCC, .36), indicating the increased value of this competency.

Within each of the six competencies are the specific illustrations. The use of the illustrations to determine leadership competencies was supported by previous studies (Duree, 2007; Hassan, 2008; Trettel, 2011). The 33 illustrations for each competency were rated by mean, mode, and standard deviation.

Tables 7–10 illustrate the differences in illustrations from current use to future use in the ratings for each college. In Tables 7 and 8, NMC rated four illustrations (1, 2, 3, 4) within Organizational Strategy as the highest illustrations for current use. The same illustrations (1, 2, 3, 4) were also ranked highly for future use, although their rankings changed in relation to other competency illustrations. NMC rated the leadership competency, Communication, as most important for current use. Two illustrations (15 and 17) from Communication were rated slightly highly for future use ( $m = 4.8$ ) than from current use ( $m = 4.4$ ), supporting their increased utilization. In Tables 7 and 8, the specific illustrations of Communication are shown and their ratings. These are the skills, actions, and activities that have bearing on program review and program cost model processes that administrators will need to emphasize. Several of these skills and actions parallel the previous finding, for example, data-driven decision making and transparent and open processes.

Table 7

*NMC – Top Competency Illustrations for Current Use by Highest Mean Score  
(N = 5)*

Rank	Mean Score	SD	Competency	Illustration
1	4.4	.8	Organizational Strategy	#1 Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.
2	4.4	.5	Organizational Strategy	#2 Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.
3	4.4	.8	Organizational Strategy	#3 Use a systems perspective to assess and respond to the culture of the organization; to changing demographics; and to the economic, political, and public health needs of students and the community.
4	4.4	.8	Organizational Strategy	#4 Develop a positive environment that supports innovation, teamwork, and successful outcomes.
5	4.4	.8	Communication	#15 Create and maintain open communications regarding resources, priorities, and expectations.
6	4.4	.8	Communication	#17 Listen actively to understand, comprehend, analyze, engage, and act.
7	4.4	.5	Collaboration	#21 Develop, enhance, and sustain teamwork and cooperation.
8	4.2	.7	Communication	#14 Articulate and champion shared mission, vision, and values to internal and external audiences, appropriately matching message to audience.
9	4.2	.4	Collaboration	#20 Manage conflict and change by building and maintaining productive relationships.
10	4.2	.4	Professionalism	#32 Use influence and power wisely in facilitating the teaching-learning process and the exchange of knowledge.

Table 8

*NMC – Top Competency Illustrations for Future Use by Highest Mean Score (N = 5)*

Rank	Mean Score	SD	Competency	Illustration
1	4.8	.4	Organizational Strategy	#1 Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.
2	4.8	.4	Communication	#15 Create and maintain open communications regarding resources, priorities, and expectations.
3	4.8	.4	Communication	#17 Listen actively to understand, comprehend, analyze, engage, and act.
4	4.6	.5	Organizational Strategy	#3 Use a systems perspective to assess and respond to the culture of the organization; to changing demographics; and to the economic, political, and public health needs of students and the community.
5	4.6	.5	Organizational Strategy	#4 Develop a positive environment that supports innovation, teamwork, and successful outcomes.
6	4.6	.5	CC Advocacy	#25 Advance life-long learning and support a learner-centered and learning-centered environment.
7	4.4	.5	Organizational Strategy	#2 Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.
8	4.4	.5	Professionalism	#32 Use influence and power wisely in facilitating the teaching-learning process and the exchange of knowledge.
9	4.4	.8	Organizational Strategy	#6 Align organizational mission, structures, and resources with the college master plan.
10	4.4	.8	Communication	#14 Articulate and champion shared mission, vision, and values to internal and external audiences, appropriately matching message to audience.

Table 9

*CPCC – Top Competency Illustrations for Current Use by Highest Mean Score (N=8)*

Rank	Mean Score	SD	Competency	Illustration
1	4.8	.4	CC Advocacy	#23 Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning.
2	4.6	.5	Professionalism	#30 Demonstrate the courage to take risks, make difficult decisions, and accept responsibility.
3	4.5	.7	Organizational Strategy	#4 Develop a positive environment that supports innovation, teamwork, and successful outcomes.
4	4.5	.5	Organizational Strategy	#1 Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.
5	4.4	.7	Organizational Strategy	#2 Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.
6	4.4	1.0	Resource Management	#10 Take an entrepreneurial stance in seeking ethical alternative funding sources.
7	4.4	.5	Communication	#15 Create and maintain open communications regarding resources, priorities, and expectations.
8	4.4	.5	Collaboration	#21 Develop, enhance, and sustain teamwork and cooperation.
9	4.3	.8	CC Advocacy	#24 Promote equity, open access, teaching, learning, and innovation as primary goals for the college
10 <sup>a</sup>	4.3	.5	Professionalism	#33 Weigh short-term and long-term goals in decision-making.

<sup>a</sup> Competencies 17, 20, and 28 also each had a mean score of 4.3 and a standards deviation of .5.



Table 10

*CPCC – Top Competency Illustrations for Future Use by Highest Mean Score (N=8)*

Rank	Mean Score	SD	Competency	Illustration
1	4.8	.5	Organizational Strategy	#4 Develop a positive environment that supports innovation, teamwork, and successful outcomes.
2	4.8	.4	Resource Management	#10 Take an entrepreneurial stance in seeking ethical alternative funding sources.
3	4.8	.4	CC Advocacy	#23 Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning.
4	4.6	.5	Organizational Strategy	#1 Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.
5	4.6	1.0	Resource Management	#7 Ensure accountability in reporting.
6	4.6	.5	Communication	#17 Listen actively to understand, comprehend, analyze, engage, and act.
7	4.6	.5	Professionalism	#30 Demonstrate the courage to take risks, make difficult decisions, and accept responsibility.
8	4.5	.5	Organizational Strategy	#2 Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.
9	4.5	.5	Organizational Strategy	#6 Align organizational mission, structures, and resources with the college master plan.
10 <sup>a</sup>	4.5	.5	Communication	#15 Create and maintain open communications regarding resources, priorities, and expectations.

<sup>a</sup> Competencies 21, 24, and 26 also each had a mean score of 4.5 and a standard deviation of .5.

In Tables 9 and 10, CPCC administrators rated the illustration from Community College Advocacy, “Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning” as most important for current use. CPCC is dedicated to its mission of workforce development, and this rating ( $m = 4.47$ ) supports the researcher’s observations of the college’s priority. CPCC also rated one of the illustrations in Professionalism highly ( $m = 4.6$ ), “Demonstrate the courage to take risks, make difficult decisions, and accept responsibility.” Resource Management illustration ( $m = 4.8$ ), “Take an entrepreneurial stance in seeking ethical alternative funding sources” was also rated highly. These two illustrations support the observations by the researcher on the entrepreneurial and dynamic culture of CPCC. While CPCC rated the same competency as most important for future use over the other five competencies, a shift in prioritization of the competency illustrations did occur.

This finding reported that each college rated one leadership competency the same for current to future use. Both NMC and CPCC rated Communication and Community College Advocacy as their top rated competencies, respectively. Each college also rated Organizational Strategy as the second most important competency for future use. The illustrations showed specific components of each competency, which may inform future work and specific tasks and skills needed for academic administrators.

#### **Finding 4**

*The overwhelming majority of participants reported that transformative and collaborative leadership and entrepreneurial and risk-taking approaches were the*

*additional competencies and approaches needed by key administrators for successful transformations.*

The sixth research question asked: What additional competencies or approaches were evidenced in successful transformations?

Five of the 29 questions asked during the on-site interviews were focused on leadership skills and competencies. Also, each interview transcript was coded based on the four leadership styles as described in Chapter 2. Table 11 shows each college's themes that emerged on leadership competencies and approaches needed in their program review and program cost studies work now and in the future.

Table 11

*Leadership Styles and Approaches*

NMC: <i>N</i> = 5	
Leadership styles	Transformative (100%), Situational (40%), Collaborative (40%)
Leadership approaches	Visionary, systemic and agile thinking, framing meaning, and risk taking
CPCC: <i>N</i> = 8	
Leadership styles	Collaboration (75%), Transformational (75%), and Situational (37.5%)
Leadership approaches	Agility, visionary, framing meaning, and patience

Previous research (Eddy, 2010; Duree, 2007; Hassan, 2008) indicated that additional leadership competencies might be needed for academic leaders. Duree (2007) reported that, while presidents agreed on the importance of Organizational Strategy, they were not as prepared in areas related to maintaining and growing college personnel and

fiscal resources or using a systems perspective (Illustrations 5 and 3). Based on this case study, it would indicate that the academic leaders of both CPCC and NMC value similar competencies and their illustrations as rated by college presidents in their work with program review and program cost studies.

Eckel and Hartley (2011), as stated previously, support that the higher education's success is "intimately linked to the capability of its leaders." The authors also spoke to the "transformational tasks" necessary in community college leadership. Eddy (2010) suggests that leadership is multidimensional and be considered within the context and culture of each college. This finding supports the need for additional competencies and skills for leaders of community colleges as reflected by the 13 administrators in this study.

The leadership themes that arose from the coding of the interviews were as follows: (1) Transformative leadership, (2) Collaborative leadership, and (3) Situational leadership. Each of the leadership traits or approaches identified from the coding supported one or more of the leadership styles. Contextual or cultural leadership was not ranked as important as the others. The leadership approaches that were recommended were: (1) visionary, (2) systemic and agile thinking, (3) framing meaning, (4) risk taking, and (5) patience. (Appendix M)

**Transformational leadership.** Twelve out of 13 participants, or 92.3%, suggested that transformational leadership is needed in their roles. Transformational leaders "promote fundamental change in the organization, helping the organization adjust to the varying needs of today's rapidly changing society" (Roueche, Baker, & Rose, 1989, p. 35).

Wallin (2010) lists four components of change or transformational leadership, which align with the themes that both colleges reported:

1. Anticipate – the leader is visionary and forwarding thinking
2. Analyze – the leader is constantly scanning the internal and external environment to engage in data driven and strategic decision making
3. Act – leaders and their key administrators are accountable and do what is required
4. Affirm – leaders need to instill trust in their followers if they hope to engage and sustain meaningful change. (p. 9)

Aligned with the first three of Wallin’s components, (1) Anticipate, (2) Analyze, and (3) Act, one administrator stated clearly these needed skills:

To be able to look out, anticipate, and identify trends and then come up with multiple scenarios to say, okay, if this happens then we must need to do this, and if that happens we need to do this. I think having that ability to scan information and to come up with solutions as new trends I think is going to be very important. (NMC1)

Another administrator supported these three areas when asked about future leadership skills:

I would say for me, analytical skills and maybe strategic kind of agility in terms of what we do with this, how might this shape our future, so some management decisions making and probably fundraising . . .” (CPCC4)

A third administrator emphasized these skills for the future related to the four components:

The skill of foresight. To be able to play scenarios that are far enough based on what is known and where you want to go in an organization with the vision . . . and analytical skills . . . I think the skill is being able to use the data in a creative and consistent way to understand the circumstances of the program. (NMC3)

A CPCC administrator confirmed the fourth component, “Affirm,” by the statement, “Trust and verify is something very important. We need to be open to other people to say, well, is that really the right way to do things?” (CPCC1)

Another CPCC administrator validated the need, as part of the fourth component, Affirm, for instilling trust in her colleagues and for sustaining change through shared meaning:

It is translating something that has to be done for one person but translating it into reframing it so people can buy into it. You know, so they can have ownership of it somewhat. Sometimes I think you can represent it in a way that must mean more to them. (CPCC5)

**Collaborative leadership.** Eight out of 13 participants, or 61.5%, identified Collaborative Leadership as the second most important leadership style utilized. Kanter (1994) talked about leaders who recognize that there are critical business relationships “that cannot be controlled by formal systems but require (a) dense web of interpersonal connections” and thus defined collaborative leadership. Eddy (2005) asserts that community colleges must adopt practices that emphasize collaborative or team decision-making.

One administrator spoke of the need for collaboration in multiple situations particularly in understanding data when implementing new processes of program review and their colleges’ program cost study: “We had a lot of data integrity questions. Then the collaboration with everybody around the table, we really got over that and now data is sound and it is accurate and it drives decisions . . .” (CPCC1).

Several administrators talked about the importance of interpersonal relationships and networks to accomplish the work of the college. It is only through those relationships will the work of the community colleges be accomplished: “I guess that would lead to

getting things done with people and through people when you really don't have any power over them at all . . . You know your power has to come from building relationships with people" (CPCC5).

Another administrator confirmed the power of listening in collaborative leadership when she reflected on what made the program review processes successful:

There were people with differing views of what program review meant and how it affected the faculty in developing and creating their plans. I would say that listening to their views of what they thought and trying to show them different models that were being used by different schools. Help them see what it was that we could do here . . . having people understand how this was going to work. (NMC5)

**Situational leadership.** Five of the 13 participants, or 38.5%, discussed the need for leadership skills that are specific to a particular time or event as important for the future. In 1969, Paul Hersey and Ken Blanchard developed the concept of situational leadership, as the name implies, in support of the concept that leadership should be examined in various circumstances or situations. Yukl (2008) described the skills necessary as flexible and adaptive leadership when there is a substantial change in situation and the leadership behaviors that warrant it.

One NMC administrator spoke to the changes at the college due to the increased need for accountability and data and its impact on students. These needs were driven by external influences that have changed the leadership and the requirements of the college:

The value to college is that under Tim's presidency we have emphasized the need for sound knowledge in making decisions, not that we didn't make sound decisions before his presidency, but clearly use of data and research have expanded during his presidency and that has been of great value to us in making decisions that are widely accepted. (NMC1)

A CPCC administrator discussed the recent purchase of a public radio station by CPCC in 2012. Her example touches on both Situational Leadership as well as agile

thinking. The college was approached in March 2012, and by July the college had completed the purchase. This decision, led by the president and supported by the Board of Trustees, assisted not only the college but also the community to maintain a well-respected resource. The president saw this purchase as an opportunity to help the community and to provide students with training in radio broadcasting and journalism. The college had the financial reserves to complete this purchase using agile, informed, and collaborative decision making.

**Additional leadership approaches.** Several of the approaches (e.g. visionary, futuristic, framing meaning) identified in the interviews were directly connected to the three dominant leadership styles of Transformational, Collaborative, and Situational Leadership. One theme that was not directly linked to one particular leadership style that emerged as a need for the future was risk taking. McNair and Phelan (2012) discussed the need for presidents to have experience in “reasonable risk taking” (p. 88).

Mr. Nelson, NMC’s president, encourages trying new ideas. One NMC administrator commented previously, which emphasized the risk taking and innovative approach, “I have a president who often says, something to the effect of ‘Fail soon, fail often, fail cheaply.’ He really wants people to try different things because that is one of the ways we find ways to improve ourselves.”

Risk taking is a key skill in fundraising. As the programs at each of the colleges were reviewed and examined for its costs, both presidents undertook fundraising strategies that assisted the colleges’ programs. New models were developed and new partnerships were created. Another NMC administrator reflected on the purchase of the



public radio station and how the leadership skills of Dr. Zeiss positively affect the college:

Our president is somebody that when he puts a stake in the sand and says that is where we need to head, we go. We said, what, on top of everything else, but he said go, do it and here are the reasons why and we said ok. But, by golly, he is right. He said that this is where we need to go and it is going well. So, you need to have a bit, I call it John Wayne style of management. It is okay to sort of be bold. (CPCC2)

### **Summary**

Both colleges determined that the leadership competencies of Communication and Community College Advocacy were most important for current use for NMC and CPCC, respectively. For future use, the top competencies did not change at either college; however the two competencies, Organizational Strategy and Resource Management, increased in rating at NMC and CPCC, respectively. Transformative, Collaborative, and Situational Leadership styles were reported as the most important leadership styles for successful implementation and integration of program review and program cost models. The additional skills of fundraising and risk taking were viewed as very important for leaders in future efforts related to this study.

## **CHAPTER 5**

### **SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

This chapter provides a summary of the research in this study, which includes its purpose, the methodology used, and the interpretive findings from the literature. It also includes limitations and conclusions as well as recommendations.

#### **Summary of the Research Study**

Community college missions have remained committed to open access; however, the functions that they have developed to accomplish each of their missions have grown considerably. This growth in scope has not been without controversy (Cohen & Brawer, 2008; Dassance, 2011; McPhail & McPhail, 2006). Dickeson (2010) states, “Most institutions can no longer afford to be what they’ve become” (p. 37). By examining the programs, their costs, and their alignment to the mission of the community college, institutions will need to focus their resources on the needs of their students and their community. Boggs (2011) states, “Now may be the best time to focus on the institution’s core mission, to discontinue programs that are least aligned to the mission” (p. 6). By undergoing this work, colleges will be more likely to focus on the high quality of their programs to better serve students as they graduate and enter the workforce. The Lumina Foundation’s Strategic Plan, 2013-2016, calls for community colleges to create new business and finance models “that significantly expand the nation’s capacity to deliver

affordable, high quality education, supported by public finance and regulatory policies that create incentives for, and remove barriers to, innovation” (p. 3).

Due to the recent recession, many colleges experienced decreased state and local funding and fluctuating enrollments. This trend of decreased funding, along with increased accountability for performance from state and regional accrediting bodies, has accelerated the need for integrated program review and program cost processes as key components of the new business model for community colleges. Jones and Wellman (2009) confirmed in their report, “Costs can be contained without sacrificing either quality or access. This will require better management of resources, including using data to make decisions, paying attention to spending, and looking at the relationship between spending and results” (p. 5). This study examined how two community colleges created and implemented program review and program cost models based on their state and local funding formulas that were integrated within their strategic planning processes.

Eckel and Hartley (2011) confirm that colleges are intimately linked to the capabilities of their leaders (p. iii). The AACC competencies (2005) were developed to provide a framework for community college leadership. Since then and given the challenging economic and financial environment, there has not been validation of the leadership competencies for key academic leaders who implement new models and processes (Hassan, 2008). This study examined the leadership competencies needed for the implementation and integration of program review and program cost studies.

### **Purpose**

There were two primary purposes addressed in this study. The literature provides information on the components of program review and its role within institutional

planning (Barak & Breier, 1990; Bers, 2011), but little has been written on the program cost studies and how program review and program cost studies are integrated to provide colleges insight into the quality and the cost of their programs. First, the researcher anticipated that this study would be helpful to the understanding of new program cost and program review models that would inform other community colleges to create new models in compliance with regional accrediting bodies and to improve both college and programmatic efficiencies and effectiveness. Second, the study hoped to show which leadership competencies, based on the AACC Leadership Competencies, were essential to future leaders as they effectively create new and integrated program review and program cost models at their institutions to improve and monitor performance.

Ample literature provides theories of leadership; however, little research exists on the leadership skills that are necessary for specifically implementing these important processes as part of colleges' institutional effectiveness efforts. Roueche and Roueche (n.d.) state, when discussing visionary leadership, that it is most effective when "the organization takes responsibility for goal attainment and assist in the devising of successful implementation actions" (p. 4). Myran, Baker, Simone, and Zeiss (2003) confirm that "Community college leaders fail because of bad implementation more often than because of bad strategy" (p. 10). This study also sought to describe what execution strategies proved useful in program review and program cost studies.

### **Methodology**

This research used a mixed methods study based on two cases. Two community colleges were purposively selected to participate in this study based on their intentional work to create new models of program cost and program review for integration into

institutional effectiveness efforts. The established criteria were (1) one institution was from a decentralized state system and the other was from a centralized state system in order to compare differences in administration and state funding models, (2) each college demonstrated evidence of new and integrated program review and program cost models, and (3) each college had a key leader in charge of the integrated planning process. Using naturalistic inquiry, the researcher collected qualitative data through in-depth interviews, on-site observations, and an intensive document analysis, including current and historical documents related to the models to document the best practices and principles of creating and implementing new models and processes. This method also allowed for the culture of each college to emerge through the interactions and observations and to determine what leadership skills and competencies were needed for the future. The data were coded, analyzed, and organized first by research questions and then categorized based on the literature. Each category was directly aligned to the research questions. There were 13 community college administrators, including the chief academic officers and chief financial officers of each institution, who participated in this study. Through this process, the researcher was able to identify effective program cost and program review models and the accompanying leadership skills utilized in their development based on the unique culture of each institution. Program review and program cost integration were also observed demonstrating different approaches to strategic planning and institutional effectiveness efforts at each college.

A 33-question paper survey based on the AACC Leadership Competencies (2005) was administered to each of the 13 administrators to determine what leadership skills were utilized and to support the qualitative data that emerged. The data were entered by a

statistician into SPSS from an Excel spreadsheet prepared by the researcher. The researcher analyzed the data to provide insight into what competencies were most important for current and future use in program review and program cost model development and integration.

### **Summary of the Findings**

Six research questions formed this study. The first three questions pertained to the development and implementation of program cost and program review models. The fourth question focused on integration, and the fifth and sixth questions were centered on leadership competencies for current and future use. The first three questions are answered collectively, yet holistically, by Finding 1. It was concluded by the researcher that a description of each question and its accompanying findings would be duplicative, as many of the elements of program review and program cost models should be represented collectively as components of successful community college institutional effectiveness efforts.

The following is a discussion of the major findings and conclusions drawn from this two-site case study research

#### **Finding 1 – Research Questions 1–3**

1. *How do community college leaders transform program cost models and program review processes to create improved efficiencies and/or effectiveness?*
2. *What are the new community college program cost models that have been developed to create efficiencies and/or promote effectiveness?*
3. *What were the stated purposes of the program cost review processes?*

The previous chapter described the processes of program cost and program review models that were created at NMC and CPCC to improve efficiencies and effectiveness. It also served to describe how the models were implemented given the history, governance, leadership, and culture of each institution. The stated purposes of program review were defined in each section on the college's processes.

The first major finding of this research study indicates that both colleges have been driven by transparent practices and business-oriented cultures and, as a result, have reinvented and sustained program review processes and created new pragmatic program cost models. These areas of change are supported by the concept of the new business model (Johnson et al., 2008; Lumina Foundation, 2013; Myran, n.d.; Zook & Allen, 2011) that can be applied to community colleges from which a new customer value proposition (CVP) is created comprised of key resources, key processes, and profit formula. Myran states that the new business model for community colleges “responds effectively to the varying demands of social, financial, political and economic forces” (p. 1). For NMC and CPCC, their new models have resulted in improved accountability and increased entrepreneurial thinking; however, elimination of programs and personnel has not occurred.

The conclusion to be drawn from this finding is that there is no “one size fits all” model for program review and program cost study. Each college's program cost model was more alike than different, despite being based on different state and local funding sources and tuition structures. Direct costs including staff, faculty, and classroom supplies were included. CPCC had included a 3% overhead cost distributed across all programs. It would serve community colleges to continue to examine their program costs

using a direct cost accounting model with the assistance and support of their chief financial officers and with the input and review of faculty and administration. Student services costs were not included in the models, which was one aspect that both colleges felt should be addressed in future models. Administrators and faculty used each college's program cost tools to create efficiencies by increased attention to enrollment management. Both models have steadily improved to include an analysis of more programs and other overhead costs. This change to use a more comprehensive array of expenses supports the emphasis the two components of "profit formula" of the new business model—"heightened focus on the utilization of every dollar in achieving student success" and "restructured tuition rates that accommodate higher-cost programs." NMC's model is available electronically through their financial services office, which facilitates the timely updating of tuition and fee revenue and associated costs and the accessibility for staff and faculty. While the concept of a business model is not considered compatible with academic institutions (Alfred et al., 2009; Keep, 2012; Redlinger & Valcik, 2008) and that colleges should be cautionary about "worshipping at the 'New Business Model' altar" (Katopes, 2009), both colleges have created and adapted not only their tools but also their cultures to become more attuned to cost and accountability.

Each college's program review models were distinctively different. NMC's model approximated a balanced scorecard and did not require any narrative. CPCC's model is a standardized model and thus qualitative in nature. Key sets of institutional data including student outcomes are required within their model. CPCC's model is based on five years with a mid-cycle review, and NMC's is a one-year model. During the revisions in both colleges' processes, they have realized the need to shorten the time between



reviews in order to improve the accountability of programs. A conclusion of this finding is that colleges will need to balance the need for accountability and the impact on faculty and staff to avoid “evaluation overkill” (Barak & Breier, 1990). Little mention was made in the literature of the role of technology to support faculty in program review; however, it is likely that colleges will need to not only balance the well-being of their personnel but also provide the financial resources needed for new program review technology and software.

Although regional accreditation drives the requirement for program review, each of the college’s program review processes have been utilized, if not embraced, by faculty as a reliable tool in their departmental planning. This trend is occurring at other community colleges and is consistent with key components of a new business model that suggests colleges create processes and products that “[shorten] business cycles with continuous improvement and transformation of curricular and student services products and processes” as well as “[increase] emphasis on the measurement of every college function and its contribution to student, business, and community success and satisfaction” (Myran, n.d.).

Both colleges’ ability to create trust and transparency in the process and its data was critical to each of their successful implementations. Colleges needed to determine collaboratively with faculty which data were necessary to provide insight into program quality and costs and to align, as applicable, with state performance and accrediting standards. This process took time for analysis and reflection. Colleges may need to be patient, avoiding a top-down approach, and yet vigilant in acquiring the correct data that

meet their needs. Data-driven decision making will be vital to their sustainability and the collaborative nature of their cultures.

Data on workforce needs were also very important to both colleges to determine the demand for their programs. Both colleges looked for external data through the program review process, including input from advisory committees to provide insight into reliable market demands. Both colleges strived to meet their community's workforce demands. A further conclusion that can be drawn from this is that colleges will need to consider the utilization of reliable and accurate labor market information, important for future program reviews, to accurately predict local and regional needs to improve their workforce programming.

Each college created new entrepreneurial approaches to sustain its programs. NMC created new business plans for its higher-cost programs that resulted in savings and a new differential tuition structure. Their new model is being developed for high-cost programs to determine the threshold between student affordability and the college's ability to sustain the programs. To date, NMC's model has proven affordable to students and the program enrollment has met tuition targets. CPCC, as a result of the utilization of their program cost study, initiated candid conversations with their local industry partners, resulting in the support from several organizations in the development of new programs. Both colleges utilize credit and non-credit delivery and a tiered funding approach. NMC's is self-directed and CPCC's is reimbursed by the state at a higher rate. These models have allowed each college to determine the most cost-efficient model that meets the college's and the students' needs. Also, NMC has adopted lean business practices in its program review model that has proven effective for the college and its culture. A

conclusion that can be drawn from this approach is that colleges will need to create different tuition and funding models and practices as well as create new business partnerships with their corporate and community partners. An additional conclusion is that the models must align with the existing culture of the college. State and local funding is not likely to return to levels where all programs are publicly supported, and a business-centered approach may prove advantageous for colleges in future program creation and sustainability.

Both colleges are focused on the value and the quality of the educational experience for the student. The program cost model has allowed each college to see the actual costs of each program and to strategize ways to reduce costs most often through section management. It also allowed the college to focus, through program review, on ways to enhance the quality of each program. As one administrator said,

The program review helps me identify current areas of enhancements, and most importantly, future strategic information. . . . That is something that we have further enhanced because I am all about quality and not about doing more and more. . . . I am convinced if we have a good quality program, you are able to compete because people want to go where there is a good quality program.  
(CPCC1)

The value of programs to a college's mission will be a critical conversation for colleges to undertake. The breadth of community college programs will have to be reduced to focus on the programs that provide students with the outcomes they need to succeed. Sheets, Crawford, and Soars (2012) assert that higher education institutions will need to create a new business model that will achieve greater economies of scale through sacrificing economies of scope in order to maintain instructional quality at affordable costs (p. 9). As a result of this reduction in scope, colleges can focus on what programs students and stakeholders want that show evidence of success. Anderson, Narus, and Van

Rossum (2006) define this process of “rigorously focusing” as being critical to constructing a customer value proposition that is meaningful based on the worth as determined by its customers, or in the case of higher education, its students.

A further and related conclusion to this finding is that, while colleges have engaged in improved accountability and entrepreneurial thinking including increased community and corporate partnerships, colleges did not eliminate programs and related personnel as a result of the program review process. Both colleges indicated that the elimination of programs and faculty associated with the programs did not occur, as it was “not in our culture.” NMC is currently engaged with one of its AQIP action projects, Declaration for Talent, that will work “to ensure all talent management processes are integrated, dynamic, and aligned with strategic planning processes,” which will assist with this concern. Colleges eliminated programs based on the retirement of faculty. The utilization, viability, and sustainability of a college’s faculty as part of its key resources are a critical element of discussion in the new model. It would best serve colleges to determine how they can best sustain their faculty and their teaching expertise while also acknowledging that program life span may not parallel or equate to the tenure of faculty. Dickeson (2010) confirms, “Faced with reducing costs in a labor-intensive enterprise like higher education and confronted by the extraordinary reluctance to remove tenured faculty, many institutions feel hamstrung in their efforts to get control” (p. 22). Mr. Nelson, NMC’s president, stated in a May 2011 presentation (NMC, 2011b) titled, “Budgeting Beyond the Dollars—It’s about Choices”:

When the environment in which an organism lives changes faster than the organism can adapt, death is certain. The same applies to organizations. If external change significantly exceeds internal change and adaptation, the

organization will perish. We must strike a balance between expenditure reduction, productivity gains, quality improvement and investment in our future.

Colleges, in order to remain adaptable and responsive, may not want to become locked into a lifetime commitment of its related personnel and will need to determine how to reduce or eliminate programs that no longer meet student, workforce, and community needs. This will pose a monumental shift for colleges and one that can also create unrest and uncertainty.

Administrators at each institution stated that human capital was an invaluable asset for the success of their institutions. The skills and competencies that contributed to the positive changes at the colleges will need to be considered for future succession planning and may be a topic of future research related to institutional effectiveness.

#### **Research Question 4**

*What are the critical components that led to successful integration of academic program review processes into the new program cost model for institutional effectiveness?*

Finding 2 for this question confirmed that the overwhelming majority of the respondents at both colleges indicated that key components that led to successful integration were (1) transparent and available data, (2) full utilization of the models by faculty and staff, (3) development of new funding models, and (4) greater responsiveness to internal and external stakeholder needs.

Integrated planning at each college is approached differently. NMC has utilized their AQIP action project, Aligned Planning Project, to develop and improve their strategic planning processes “towards more of a program review continuous improvement model.” This is in alignment with Category 8 of HLC/NCA’s accreditation standard

called planning continuous improvement. NMC does not have a director of planning unlike CPCC, which has one person who is charged with leading the strategic plan. NMC's program review model is based on the Kirkpatrick (1994) model of four levels of instructional evaluation and was an important step in developing and revising program review. Strategic planning efforts are coordinated by the Office of Research, Planning and Effectiveness, which includes a Coordinator for Planning and Market Understanding, a position created as a result of the AQIP Aligned Planning Process project. NMC's Planning and Budget Council, a cross-college team, relies on the program review information to develop its annual strategic plan, which begins in August of each year and is revised every two years. NMC has clearly defined outcomes for all levels of its plan including the Board of Trustees' Strategic Goals. NMC uses its Planning and Budget Council and its Leadership Group to allocate resources and priorities and to plan operationally. The program cost model is not incorporated into the program review process, but, like CPCC, it is directly linked to the budgeting processes. NMC's program review model is based more on course efficiency rather than on cost efficiencies.

CPCC's program review process is led by the co-chairs of the Institutional Effectiveness Committee and managed from the Office of Institutional Research and Planning. There is one person who coordinates the program review process. Program review is a centralized approach at CPCC. CPCC also has a centralized approach to its Strategic Planning. Data from the program reviews are linked to the CPCC's 2009-2014 strategic plan in their key performance indicators. CPCC's strategic plan spans five years compared to NMC's two years. The Office of Institutional Research and Planning and the Vice President for Learning at CPCC play an integral role in the validation and advocacy

for program review and resource allocation. A limitation to this component of this study was the ability to determine the level of involvement from the Institutional Effectiveness Committee as the topic of program review was not mentioned in the most recent public documents and committee minutes available on CPCC's website.

It is notable that the findings for NMC parallel those of CPCC. Both colleges rated the transparent use and availability of reliable data as being the most important aspect of the successful integration of program review and program cost models. Both colleges indicated the level of trust necessary in developing these models. The findings are consistent with the rating of each college on the AACC competency illustration, "Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically," which received high ratings from both colleges in the leadership survey. Each college described the importance of creating transparent processes for faculty and staff in determining which data to use and how it was determined. It is worth noting that both colleges have been equally committed to the acquisition of accurate and reliable programmatic data for program review and program cost models that are required for their colleges, their states, and regional accrediting bodies. This element and finding supports the new business model component of "refined and redesigned data management processes that will collect, analyze, and report effectively institutional statistics and performance to internal and external stakeholders" (Myran, n.d.). They are also equally committed to teaching faculty and staff about their programmatic data in order that programmatic improvements can be made. The Lumina Foundation Strategic Plan 2013-2016 (2013) confirms the need for metrics as "they help to motivate the participants and generate public support, and provide valuable feedback

to help adjust and modify strategies and approaches” (p. 10). It is also consistent with Finding 1, in which participants stated that the use of data was vital to the transformation of these processes.

NMC’s program review, the A3, is a quantitative review and its measures are directly linked to NMC’s strategic plan. CPCC’s program review is qualitative and does not include as much data. It also does not show as direct a link to the strategic plan as NMC’s, yet student outcomes are an obvious component of CPCC’s strategic plan’s performance indicators. A conclusion to this finding is integration takes time and it takes resources for improvement. With limited budgets to cover current expenses, colleges are challenged to implement new improvement strategies at additional cost. Community colleges may be well served by implementing data analysis training for faculty, particularly department heads and divisional chairs, into professional development opportunities on their campuses. Data summits, used in Achieving the Dream colleges such as CPCC, may be a model that can be replicated programmatically and systemically. Data training for faculty may improve the ability of programmatic faculty and staff to analyze their program and student outcomes in order to improve student success.

New funding models have resulted in each college’s analysis and change to the tuition structure of high cost programs. CPCC has been aided by the change in tuition structure from the state that allows a more fluid model in developing credit and non-credit programs. NMC has also developed new tuition structures based on course profitability. A related conclusion to this finding indicates that colleges will need to increase the level of focus in their strategic plans on community collaborations and fundraising for their programs. Colleges like CPCC and NMC have been innovative and



entrepreneurial in their approaches and have had dedicated support from their presidents and boards to institute new funding models. This parallels McNair and Phelan's (2012) assessment of the need for future AACC competencies to include "entrepreneurial thinking for the future" (p. 92). Boggs (2011) reported that fundraising and financial management are the two skills for which presidents state they are least prepared (p. 14). This will be a critical issue for colleges to determine as they assess the balance of the issues of quality, cost, and access and for the skill development of current and future community college leaders.

Accrediting requirements, as defined by HLC/NCA and SACS/COC, drive both colleges' processes, yet both colleges have shown that they are able and willing to have reflective, cross-college conversations within their institutions that improve outcomes for students. These processes have resulted in greater responsiveness to internal and external stakeholders. Programs have been created and some have been consolidated into umbrella programs. Only recently, due to retirements, have other programs been eliminated. NMC is required to submit State Accountability measures. NMC does not have state-required measures; however, all of its measures related to the strategic plan are available on the college's website. NMC continues to monitor its performance and community satisfaction.

The researcher's final conclusion to this finding is each college will need to utilize its resources to drive program improvements that benefit internal and external stakeholders. Local and national initiatives are asking for more involvement from business and industry in the design of community college curricula, including general education. CPCC's regional initiative in redesigning math curricula for secondary and

postsecondary students is one excellent example of this responsiveness and collaboration with external stakeholders. Alfred (2011) emphasizes that it will be important for colleges' models of effectiveness to be sensitive to the influence of stakeholders and that in the future, colleges will need to gather more information from their constituents and stakeholders to gauge the college's performance.

Both colleges work actively with their advisory committees; however, colleges will need to increase and refine the level of input from stakeholders, including advisory committee members, to ensure that external feedback is being received and acted upon effectively. Each college is working to improve its transparency internally and externally and to demonstrate the positive outcomes for its students of increased skills and competencies to increase graduation and completion rates.

The findings of the previous research questions were directly related to the components and the processes that were vital to the successful integration of the program cost model and program review. The last two findings address the leadership competencies that were needed. Skilled leadership is a vital component to managing change and continuous improvement.

### **Research Question 5**

*Utilizing the current AACC competencies as a framework, what leadership competencies led to a successfully integrated process?*

Of the six AACC competencies, Communication and Community College Advocacy were rated as the most important for both current and future use in the development of program review and program cost models. One competency, Organizational Strategy, was rated the second highest competency for future use by both

NMC and CPCC. All six competencies, however, had little variation between the competencies. This mirrors the finding of Hassan (2008) in his study of community college presidents and the recommendation that the AACC competencies have relevance not only to college presidents but also to other academic leaders.

NMC's five administrators rated Communication as the highest AACC Leadership Competency for current use in their roles. CPCC's eight administrators rated Community College Advocacy the top needed competency. It is worth noting that each college did not change the competency that they valued the most for future use and may indicate and support the culture of each institution and their successful efforts to date. While the two competencies of Communication and Community College Advocacy were rated the highest, there was little deviation in the overall rating of these two competencies.

Three of the four illustrations from Communications were included as NMC's highest rated for current use. The same three competencies remained as critical for future use. The one illustration that rose to more important for future use was, "Create and maintain open communications regarding resources, priorities, and expectations." NMC has been diligent in its efforts to involve staff in strategic planning efforts. This illustration demonstrated NMC's commitment by its leaders to transparent communication that delineated clearly what faculty and staff could expect from them in the development and implementation of these processes.

For the future, NMC rated Organizational Strategy as an important competency next to Communication. The illustration "Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term

health of the organization” was rated most necessary for NMC’s academic leaders. Duree (2007, as cited in Hassan, 2008) also found that presidents agreed on the importance of the Organizational Strategy competency, but they rated lower their level of preparation in skills necessary to meet the challenges of this competency.

CPCC rated Community College Advocacy as their top competency for current use with the illustration, “Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning.” CPCC is a strong leader in its region and the nation for student success initiatives, including Achieving the Dream. The second competency for current use that was rated slightly less than Communication was Collaboration. This competency was evident in the interviews with the CPCC administrators, with the overwhelming majority stating that collaboration was critical to the creation and improvement of new processes and tools. Hassan (2008) noted that Community College Advocacy was rated the highest by community college presidents and trustees, and he cautioned that it “was developed by the fewest number of experiences” (p. 76). Hassan suggests that the skills required in this competency might need further development by leaders.

For future use, Community College Advocacy remained constant for CPCC; however, Resource Management was rated as highly, but only slightly less consistently by all administrators. The illustration “Take an entrepreneurial stance in seeking ethical alternative funding sources” reflects CPCC’s culture as evidenced by this study. The increased need for the development of new business and finance models for community colleges is supported by the literature. This competency rating by CPCC indicates that their academic administration supports this need as well, as the old business model of

heavily state-funded community college budgets are no longer possible. CPCC has demonstrated its ability to create new partnerships, flexible program funding models, and responsive programming, despite the cuts from state and local funding sources.

The conclusions from this finding indicate that the leadership competencies remain useful and important at two colleges for the academic administrators who are instrumental in creating change to drive improvement in program review and program cost model processes. Change at an institutional level requires strong, adaptive, and cohesive leadership. Dickeson (2010) confirms that colleges and universities are recognizing the growing emergence and interdependence of their academic leadership at all levels of the institution. It will be important for college administrators, given their institutional culture and organizational capacity, to continue to support the need for change, to have the ability to make decisions that support improvements, and to continue to work collaboratively balancing integrity and authority.

The last finding addresses the final research question on additional leadership skills and approaches needed for the future.

### **Research Question 6**

*What additional competencies or approaches were evidenced in successful transformations?*

The overwhelming majority of participants reported that transformative and collaborative leadership and entrepreneurial and risk-taking approaches were the additional competencies and approaches needed by key administrators for successful transformations.

All of the academic leaders at each college spoke to the changes that have occurred at their colleges in the last three to five years as a result of declining resources and increased accountability. They all have provided evidence of change in key processes that are designed to improve program and student learning outcomes as part of each college's institutional effectiveness efforts. Wallin's (2010) four components of transformational leadership were utilized by the academic leaders of this study and are supported by the six leadership competencies.

Collaborative leadership was viewed as the second leadership style that was most important. It was the collegial relationships that supported the creation of the processes at both institutions. Administrators talked about handling conflict, particularly in their understanding of data, and how through time and trust, they were able to overcome barriers and arrive at a mutual understanding for the benefit of students.

The third leadership style that was discussed was Situational, given the examples provided by the participants. Situational leadership utilizes different skills depending on the situation. Leaders also demonstrate adaptive and flexible leadership to accommodate change and react according to the new situation.

Each college relies on its key academic administrators to carry out, analyze, act, and affirm the message of the president. And yet, it is the president who sets the vision. Neither president was formally interviewed for this study, which may be considered a component of future research. However, it is the charismatic and systemic thinking generated by the president that permeates the culture of the college. Seymour (1992) defines culture as "a social or normative glue that enables an organization to solve problems. . . . Every organization has a culture—'how we do things around here'—and

because culture is context-bound, every organization's culture is different" (p. 144). Schein (2004) confirms that "As the world becomes more complex and interdependent, the ability to think systemically, to analyze fields of forces and understand their joint causal effects on each other, and to abandon simple linear causal logic in favor of complex mental models will become more critical to learning" (p. 401).

Each of the college presidents at NMC and CPCC has set the vision for successful transformation. It is what Wallin describes as the component of "Anticipate." Both NMC and CPCC have strong leaders in their presidents and each has experienced a stable tenure. For this study, stable leadership is defined as leaders serving in their positions for over three years. Dr. Zeiss has served as president for 20 years, and Mr. Nelson for 12 years. Both presidents demonstrate key leadership qualities that support institutional effectiveness: they both fit their culture, they show their dedication to institutional effectiveness and quality improvement, and they work with their colleagues to create an open and collaborative environment. Roueche and Roueche (n.d.) confirm, "Leaders who transform institutions into better selves are true artists."

The last two approaches that participants valued were entrepreneurial and risk-taking approaches. Colleges will need to balance the goal of increased revenue with careful consideration of reasonable strategies that can improve their programs and their services. Risk taking also served to encourage participants and their colleagues to try new ideas and to be creative. NMC has assigned the president a dedicated budget, as funds allow, for innovation.

The combination of these skills and competencies are critical components for the development and integration of program review with program cost/cost-to-educate

models. While both colleges have not fully integrated program cost models into their program review processes, resource allocations are being made as a result of program reviews. Each college has demonstrated crucial elements of their progress and has implemented creative models in both areas for full utilization by staff and faculty.

A conclusion to this finding indicates the value of specific leadership skills and competencies in creating new models that are valued by each institution. Leaders may want to consider the use of the Leadership Competencies when engaging in the development of new processes related to program review and program cost models and how decision-making teams prioritize the competencies. NMC and CPCC have enjoyed stable leadership not only in their presidents, but also in their key administrators. It will bear consideration for colleges that have not experienced this same level of stability to also use the leadership competencies when initiating new processes, particularly those that are part of institutional effectiveness strategies.

### **Recommendations from the Research for the Creation of a New Business and Finance Model for Community Colleges**

*Customer Value Proposition – What is its source of differentiation? Created and informed by the perceived value from its culture, its stakeholders, and its community.*

The following model is based on Myran (n.d) and Kaplan and Norton (2001). Using Kaplan's and Norton's three key components of the new business model, key resources, key processes, and profit formula, and Myran's list of community college traits (in bold) of the new business model, the researcher has identified future practices of community college program review and program cost models and processes as listed below. The three components contribute to the new community college customer value proposition, the fourth and final element of the new business model.



***Key Resources:***

- 1) Increased resource development that looks to the long-term capacity building, viability, and sustainability of college programs and its students, staff, and faculty and facilities**
  - a. Create corporate partnerships and cost sharing strategies.
  - b. Provide financial support for faculty leadership in program review and institutional effectiveness efforts.
  - c. Create innovation funding to support creative, entrepreneurial, and noteworthy solutions in meeting colleges' needs and improving efficiencies.
  - d. Utilize a "bottom-up" approach to develop trust in process changes and data analysis.
  - e. Create faculty-hiring structure that secures faculty employment for 3-5 years.
  - f. Assess human capital to maximize commitment and creativity for the betterment of the institution.
  - g. Increase fundraising skills for college administrators beyond the president to request funds on behalf of the college.
  - h. Allocate appropriate technological support early and consistently in process improvements.
  
- 2) Increased emphasis on the measurement of every college function and its contribution to student, business, and community success and satisfaction.**

- a. Create accurate and up-to-date cost accounting for all programs including student services.
  - b. Create shared measures that are meaningful, accessible, and finite.
- 3) Increased development of transformative and responsive workforce programming based on changing workforce trends, data, and skill requirements**
- a. Create new and enduring partnerships with community organizations to ensure the responsive creation of workforce programs.
  - b. Access and utilize labor market data and remain vigilant in creating and sustaining corporate and organizational relationships.
  - c. Eliminate programs that no longer serve stakeholder needs and create new ones quickly and continually.
  - d. Create strong partnerships with advisory committees using their expertise and their resources to ensure the relevancy of workforce curricula.
- 4) Shifting emphasis to the distinctiveness of the community college versus other service providers to combat the commodification of higher education services.**
- a. Implement college wide discussions on the college mission and the programs to which it is aligned based on institutional data.

- b. Reduce the scope of the community college mission based on student, stakeholder and community needs to enhance performance and maintain affordable costs for future programming.

***Key Processes:***

**1) Shortened business cycles with continuous improvement and transformation of curricular and student services products and processes**

- a. Utilize an annual quantitative program review cycle that responds to student, market, and community demand.
- b. Integrate program costs into program review processes to increase accountability and viability.
- c. Include operational planning support and requests in each program review process to ensure accountability.
- d. Utilize non-credit programming to provide shorter implementation times and provide seamless articulation into credit programs.
- e. Involve students, staff, and faculty in continuous and collaborative improvement efforts.

**2) Refined and redesigned data management policies, procedures, and systems that will collect, analyze, and report effectively institutional statistics and student performance to internal and external stakeholders.**

- a. Provide transparent and accessible web based scoreboards of performance and accountability for all areas of the college.

- b. Provide for the full commitment of technology for the design and support of interactive and accessible reporting systems.
- c. Provide consistent and constant data review training for faculty and staff by providing accurate analysis and interpretation of data.

**3) Rebuilt internal audit practices that facilitate internal performance and productivity through data-driven decision making and performance reporting**

- a. Create transparent and patient processes resulting in a mutual understanding of the data.
- b. Utilize leadership competencies to assess skills needed for the successful implementation of new processes with the context of each college.

***Profit Formula:***

**1) Heightened focus on the utilization of every dollar in achieving student success and completion to improve efficiencies and effectiveness for that goal**

- a. Utilize fundraising efforts to reduce programmatic costs.
- b. Create and utilize tuition structures to maximize college revenue and reduce annual tuition increases.

**2) Restructured tuition rates that accommodate higher cost programs with higher levels of financial aid for low-income students**

- a. Advocate for increased state and federal funding to offset high cost programs to ensure that low-income students can still afford a community college education.

**3) Maximized and adapted college resources into profit centers through public access to food service, bookstores, sports, arts and theater, and other services.**

- a. This was not addressed in this study.

This study adds to the existing knowledge base validated by literature that states that integration is possible despite the differences in key factors including culture, personnel, accrediting bodies, and governance in the development of two key components of institutional effectiveness—program review and program cost models. Program review has been a steady component of most college’s accreditation requirements; however, the accountability for their costs has not been a key component. This study has also provided a new lens through which to view colleges’ program review processes with their program cost models and how programmatic costs may need to be embedded into program review processes to give each institution a holistic view of the quality and the costs of each of its programs to assist them in their continuing efforts to ensure that the programs that are being offered meet the mission and vision of the institution.

**Limitations**

This study has four issues that may be considered limitations that should be taken into consideration. These limitations are:

1. The sample size for the survey was 13 participants. While representative of the administrative leadership that was directly involved with program review and program costs models at both colleges, it does not represent the opinions of others, including faculty. The small sample size precludes any generalization of the survey results.
2. Meetings did not occur as planned. It proved more difficult to coordinate meeting schedules with interviews. Future consideration would be to schedule the desired meetings first and then arrange the interviews accordingly. Multiple trips over several months may be considered.
3. Thirty-three of the 45 AACC Leadership Competency illustrations were chosen to represent the six AACC Leadership Competencies in the survey based on the literature review. The factors that were extracted were in Communication (2), Collaboration (4), Community College Advocacy (2), and Professionalism (3). No factors were removed from Organizational Strategy and Resource Management. This replicated the practice of Trettel's (2011) study on leadership competencies in which the number of competency illustrations was reduced.
4. There was no clarification by the researcher of the competencies so participants were left to interpret each competency and how it applied to their leadership. The interpretation of the competencies may not have been consistent.

## **Recommendations**

The conclusions from this study strongly indicate that the development and integration of program review and program cost studies into institutional planning, including budgeting, contributes to institutional effectiveness. Each process becomes more effective when the leadership and the culture of an organization are considered as they contribute to the well-being and productivity of an institution. These elements are critical if colleges are to create a new business model comprised of key processes, key resources, and profit formula that contribute to the customer value proposition of student success. For the future, community colleges will need to devote resources for the continued improvement of their program review and program cost models, thereby increasing their efforts of coordinated planning and decision making. A deeper understanding of each college's strengths and challenges can be gathered only through a focused and prioritized approach that aligns and supports the college's strategic plan and accreditation requirements.

Considerations for other institutions, including four-year colleges and universities, are as follows:

1. Create an environment of trust that is represented by stable and collaborative leaders who are willing to patiently analyze and lead new processes as part of a collective vision of student success.
2. Determine the availability of resources early, including those of faculty, staff, finances, and technology, to drive these processes successfully to reduce time to delivery and improve utilization and accessibility of the tools. Determine potential funding for faculty participation.

3. Re-examine the institutional mission and determine how program review is directly linked in order to improve alignment and eliminate programs and services that are no longer needed based on pre-determined and mutually agreeable data or performance measures.
4. Continue to revisit program review and program cost models to determine how they can become more systematic, synchronized, and interactive. Examine co-existing processes to eliminate duplication of reporting and link new and revised initiatives to the operations of the college.
5. Increase the role of fundraising and entrepreneurial thinking across the institutions and provide training for key academic administrators beyond the president and advancement officers. Develop academic leaders to increase their knowledge of potential donors and supporters for their discipline and community.
6. Utilize transformational leadership that anticipates, analyzes, affirms, and acts.

### **Recommendations for Future Research**

The purpose of this study was to identify and investigate two colleges and their efforts to integrate program cost models and program review for improved efficiencies and effectiveness. It also examined what leadership skills were needed for current and future implementation. Colleges with different accreditation requirements, culture, and leadership styles could be studied to determine if the findings from this study were applicable. Future studies may indicate which programs and services colleges have chosen to eliminate and which programs they have chosen to revitalize. It will bear



noting how each college unique in its culture and its community may make these decisions. Future collaborations and programs consortia may be developed as a means of sharing resources across not only other institutions but with businesses and industry. The leadership skills needed to implement and integrate these processes may need to be re-examined using the new 2013 AACCC leadership competencies to determine what additional skills may prove useful. Lastly, future studies could examine other models of program review and program cost models to determine their integration and relevant characteristics that will benefit other colleges to make the hard decisions for the future. Continued monitoring of accrediting bodies and their emphasis on institutional effectiveness will be important for future studies. Regional discussions on effective practices in program review and cost models that meet accreditation standards may be useful to share with other institutions.

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**APPENDIX A**  
**INTERVIEW QUESTIONS**

## **Research Face-to-Face Interview Questions**

Opening: Tell me your name, position in your college, and the number of years you have worked at here.

### *Introduction:*

When someone says, “program review” to you, what does this mean for you?

What does a program cost study or program budget model mean to you?

### *A. History*

General Question: What is the history of your involvement with the development and implementation of program cost models and program review at your college?

Follow up questions:

1. How many years has the program cost model been in effect?
2. What was the process for determining program costs previously?
3. How many years has the program review process been in effect?
4. What was the process for program review previously?
5. Who has been responsible for program review? Has there been a change in leadership or leadership style that effected the development of program cost models or program review?

### *B. Context*

General Question: What were the influences or factors that impacted the creation of your college’s program cost model and program review?

Follow up Questions:

1. What were the influences or factors that created your program review model?  
Please give examples.
2. What leadership skills did you find the most useful during your involvement?  
Give an example of what skills you used and how you applied them.
3. What were the leadership implications of this change? What proved effective?  
What proved not as effective?

*C. Implications and Changes*

General Question: Has program review been linked effectively to other processes at your college? (If so, which ones? Budget? Strategic Planning? Institutional Effectiveness?)  
If so, how and what are some examples of actions taken or changes made?

Follow up Questions:

1. Based on your experience, would you say that the integration has been successful? Why or why not?
2. What work must occur in the future so this integration can be successful?  
What are the barriers, if any?
3. Thinking back, what would you say is responsible for this success? Who drove the change and why?
4. What examples do you have of actions taken or changes made as a result of this integration? (Accreditation standards or other forces? How many years have they been integrated?)

5. What were the leadership competencies (skills and knowledge) that assisted you in the integration? (What did you need to know and how did you apply them?)
6. Have any key leadership changes occurred during this time? Ex: President, Dean of Institutional Research, Provost. What impact did these changes have?
7. What leadership skills do you think will be necessary to drive changes for the future at your college?

#### *D. Areas of Improvement*

General Question: If you could change one thing about the creation of your program review and your budget/program cost study what would it be?

Follow up Question:

1. What are the top three leadership skills are needed to implement changes or improvements in your role?
2. What leadership skills are needed in other roles? Ex: President, CFO, Institutional Research, Deans?
3. What advice would you give another college wanting to integrate program review and budget cost models into their planning processes?

#### *E. Impact*

General Question: What impact has the program cost model and program review had on your college in the last 3-5 years? Why and how?

1. What changes you think will be made to each of the processes in the future?
2. What do you foresee will impact your processes in the future?

3. Who do you think will impact these processes for the future?
4. What is the value of these changes to the college? To the students? To you?

**APPENDIX B**  
**LEADERSHIP SURVEY**

**Leadership Competency Survey: Study Participant Information:**

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This is a confidential survey of community college personnel that have primary responsibility for guiding academic program review and the development of program cost models at your college. No names will be used in the reporting of these results without prior permission. The survey consists of 34 questions and should take 15 minutes or less to complete.

1. Your position title \_\_\_\_\_
  2. Time (in years) in your position \_\_\_\_\_
  3. Were you familiar with the AACC Competencies prior to this survey? Yes \_\_\_ No \_\_\_
- 

This survey is based on the American Association of Community College’s (AACC) six Leadership Competencies that were implemented in 2005 and endorsed by community college leaders.

*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) **your evaluation of the use of each competency during the development of program review and program cost models at your institution** and b) **your evaluation of the competency and its importance in your role for these processes in the future.***

**Rating Scale: 1- 5** (1=not important, 5=extremely important)

**Example:** An effective community college leader strategically improves the quality of the institution, protects the long-term health of the organization, promotes the success of all students, and sustains the community college mission, based on knowledge of the organization, its environment, and future trends.

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)...	1	2	3	4	5
b. Future importance (should occur)...	1	2	3	4	5

**“Current use” for the purpose of this study means your evaluation of your own use of the leadership competency.**

**“Importance” means your evaluation of this competency for future use in your role.**

Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.

**First Competency: Organizational Strategy -**

**1. Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**2. Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**3. Use a systems perspective to assess and respond to the culture of the organization; to changing demographics; and to the economic, political, and public health needs of students and the community.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**4. Develop a positive environment that supports innovation, teamwork, and successful outcomes.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**5. Maintain and grow college personnel and fiscal resources and assets.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5



*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.*

**6. Align organizational mission, structures, and resources with the college master plan.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance (should occur)	1	2	3	4	5

**Competency 2: Resource Management -**

**7. Ensure accountability in reporting.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**8. Support operational decisions by managing information resources and ensuring the integrity and integration of reporting systems and databases.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**9. Develop and manage resource assessment, planning, budgeting, acquisition, and allocation processes consistent with the college master plan and local, state, and national policies.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**10. Take an entrepreneurial stance in seeking ethical alternative funding sources.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.*

**11. Implement financial strategies to support programs, services, staff, and facilities.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**12. Employ organizational, time management, planning, and delegation skills.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**13. Manage conflict and change in ways that contribute to the long-term viability of the organization.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**Competency 3: Communication -**

**14. Articulate and champion shared mission, vision, and values to internal and external audiences, appropriately matching message to audience.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**15. Create and maintain open communications regarding resources, priorities, and expectations.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.*

**16. Convey ideas and information succinctly, frequently, and inclusively through media and verbal and nonverbal means to the board and other constituencies and stakeholders.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**17. Listen actively to understand, comprehend, analyze, engage, and act.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**Competency Four: Collaboration –**

**18. Embrace and employ the diversity of individuals, cultures, values, ideas, and communication styles.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**19. Catalyze involvement and commitment of students, faculty, staff, and community members to work for the common good.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.*

**20. Manage conflict and change by building and maintaining productive relationships.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**21. Develop, enhance, and sustain teamwork and cooperation.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**Competency Five: Community College Advocacy –**

**22. Value and promote diversity, inclusion, equity, and academic excellence.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**23. Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

*Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.*

**24. Promote equity, open access, teaching, learning, and innovation as primary goals for the college, seeking to understand how these change over time and facilitating discussion with all stakeholders.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**25. Advance life-long learning and support a learner-centered and learning-centered environment.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**Sixth Competency: Professionalism –**

**26. Demonstrate transformational leadership through authenticity, creativity, and vision.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**27. Understand and endorse the history, philosophy, and culture of the community college.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**28. Self-assess performance regularly using feedback, reflection, goal setting, and evaluation.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

Please rate on a scale of 1-5 (1=not important, 5=extremely important) each of the following two-part questions based on a) your evaluation of the use of each competency during the development of program review and program cost models at your institution and b) your evaluation of the competency and its importance for you in your role for these processes in the future.

**29. Manage stress through self-care, balance, adaptability, flexibility, and humor.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**30. Demonstrate the courage to take risks, make difficult decisions, and accept responsibility.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**31. Understand the impact of perceptions, worldviews, and emotions on self and others.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**32. Use influence and power wisely in facilitating the teaching-learning process and the exchange of knowledge.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

**33. Weigh short-term and long-term goals in decision-making.**

	Not Important	Minimally	Moderately	Very	Extremely Important
a. Your use (occurred)	1	2	3	4	5
b. Future importance	1	2	3	4	5

In your opinion, are there any other competencies that are needed for future leaders to implement new program cost models and academic program review to improve college efficiencies and effectiveness? If so, please comment below:

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**How familiar are you with the AACCC Leadership Competencies? Please rate:**

**Scale of 1- 3:**

- 1 – I was very familiar with them and have used them in my work.
- 2 – I am read them but I really haven't used then in the context of my work.
- 3 – I haven't heard of them before.

**APPENDIX C**  
**IRB APPROVAL**



To: Dr. Roberta Teahen & Fiona Hert

From: C. Meinholdt, IRB Chair

Re: IRB Applications #120903 (Title: Increasing Efficiencies and Effectiveness in Community Colleges: Program Review, Program Cost Studies, and the Transformative Practices of Leaders in Two Community Colleges)

Date: October 19<sup>th</sup>, 2012

The Ferris State University Institutional Review Board (IRB) has reviewed your application for using human subjects in the study, "Increasing Efficiencies and Effectiveness in Community Colleges: Program Review, Program Cost Studies, and the Transformative Practices of Leaders in Two Community Colleges" (#120903) and approved it as exempt – 1C from full committee review. This approval has an expiration date of three years from the date of this letter. As such, you may collect data according to procedures in your application until October 20<sup>th</sup>, 2015. It is your obligation to inform the IRB of any changes in your research protocol that would substantially alter the methods and procedures reviewed and approved by the IRB in this application. Your application has been assigned a project number (#120903) which you should refer to in future applications involving the same research procedure.

We also wish to inform researchers that the IRB requires follow-up reports for all research protocols as mandated by the CFR (Code of Federal Regulations) 45, Title 46 for using human subjects in research. Thank you for your compliance with these guidelines and best wishes for a successful research endeavor. Please let me know if I can be of future assistance.

**APPENDIX D**  
**COVER EMAIL**

**Email: Participation in research study – Academic Program Review and Budget/Program Cost Models**

Dear \_\_\_\_\_,

As you know, I am a doctoral student in Ferris State University's Doctorate of Community College Leadership Program and would like to study your college as part of my dissertation. My dissertation is titled Increasing Efficiencies and Effectiveness in Community Colleges: Program Review, Program Cost Studies, and the Transformative Practices of Leaders in Two Community Colleges. I am interested in learning from your institution the practices and processes that were implemented to develop and implement program review and program cost/program budget models to improve your institutional effectiveness efforts. Additionally, I am interested in community college leadership and particularly those competencies that are used for the inception and implementation of process improvement efforts and products. Because you have been identified as a key administrator at your college in these processes, I am inviting you to be an interview participant in this research study. I have received prior approval from your institution's Dean of Institutional Research to conduct this study on your campus.

Research Overview:

The key research question is as follows:

How do community college leaders transform program cost models and program review processes to create improved efficiency and/or effectiveness?

Five additional research questions that informed the question are:

- A. Program Cost Models and Program Review
  1. What are the new community colleges program cost models that have been developed to create efficiencies or promote effectiveness?
  2. What were the stated purposes of the program cost and program review processes?
  3. What are the critical components that led to the successful integration of academic program review processes into the new program cost model for institutional effectiveness?

B. Leadership Competencies:

1. Utilizing the current AACC competencies as a framework, what leadership competencies led to a successfully integrated process?
2. What additional competencies or approaches were evidenced in successful transformations?

I would like to visit your college in October or November 2012. The interviews will take approximately 60-90 minutes and will be audiotaped. Upon completion of the interviews, I will analyze the responses for common themes and draw conclusions that may assist other colleges that are developing new program review and program cost models to improve efficiencies and effectiveness.

As part of my research, I will also conduct a 34-question paper and pencil survey that will take approximately 15 minutes to complete. The survey would be administered at the end of the face-to-face interviews during my initial visit. All responses will remain anonymous.

The results of the study will be included in my dissertation to be defended to a committee at Ferris State University in spring 2013 and may be used in future published articles and professional presentations.

Benefit of Participating in this Research:

Participation in this research may serve to inform others of the effective practices of program review and program cost/budget models at your college and how they can be applied to other institutions for their benefit. Given the limited resources of community colleges and the increasing demand to serve their constituents, your college's processes and practices may inform others to better serve their students and their communities.

Anonymity/Confidentiality:

As your college is one of two in this case study, it prohibits anonymity of the college. That said, your name will not be associated in any publication or presentation with the information collected about you or with the research findings from this study. Instead, the researcher will use a study number or a pseudonym rather than your name such as "Dean – Roman Numeral" Ex: "Dean IV." Your identifiable information will not be shared unless required by law or you give written permission. Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give permission for the use and disclosure of your information for purposes of this study at any time in the future.

Risks of Participating in the Research:

While considered minimal, it is acknowledged that there is potential risk to relationships through authentic responses of a sensitive subject matter. Effort will be made to avoid these responses to you and your institution, however readers familiar with your college may still make association.

Research Data:

The face-to-face interviews will be audio taped and professionally transcribed for analysis. Audio recordings will be securely maintained by me as the researcher and password protected. All survey documents will be stored electronically and password protected.

Informed Consent:

Engaging with me to arrange a time, date, and location for the interview and then subsequently presenting for the interview and the survey will be considered your voluntary consent to participate. You will be asked to sign an informed consent form prior to the onset of the interview.

Attached you will find the approval allowing me to proceed with my research efforts issued by Ferris State University's Institutional Review Board for the Protection of Human Subjects. Your contribution will greatly contribute to my study and I look forward to our meeting this fall 2012.

Thank you for your consideration of this topic and for your contribution to this research.

Sincerely,

Fiona Hert, M.S.W.

Doctoral Candidate, Ferris State University, Doctorate of Community College Leadership Program

**APPENDIX E**  
**INFORMED CONSENT FORM**

## INFORMED CONSENT

By signing this document, I understand the following:

- I am being interviewed as part of a qualitative study titled: Increasing Efficiencies and Effectiveness in Community Colleges: Program Review, Program Cost Studies, and the Transformative Practices of Leaders in Two Community Colleges
- My interview will be audio taped and professionally transcribed in the form of a typed transcript intended for analysis. Audio recordings will be heard by the researcher and transcriptionist only and destroyed upon production of the transcript. Transcripts will be securely maintained by the researcher and password protected for a period of two years following the study, at which time they will be re-formatted and destroyed.
- Survey results will be securely maintained and stored for two years. Two years following this study all documents will be destroyed.
- My responses will be included in the researcher's dissertation to be defended to a committee at Ferris State University in the spring of 2013 and may be used in future published articles and professional presentations.
- Results of the study can be made available by contacting the researcher:  
Fiona Hert  
Grand Rapids Community College  
143 Bostwick Avenue N.E., Grand Rapids, Mi. 49503  
[fhert@gbcc.edu](mailto:fhert@gbcc.edu), 616/234-3828
- While considered minimal, I acknowledge potential risk to relationships through authentic responses of delicate subject matter. Effort by the researcher will be made to avoid association of sensitive responses to me or to my institution however, association may still be made by readers familiar with the your institution.
- As your college is one of two in this case study, it prohibits anonymity of the college. That said, your name will not be associated in any publication or presentation with the information collected about you or with the research findings from this study. Instead, the researcher will use a study number or a pseudonym rather than your name such as "Dean – Roman Numeral" Ex: "Dean IV." Your identifiable information will not be shared unless required by law or you give written permission. Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give

permission for the use and disclosure of your information for purposes of this study at any time in the future.

- My participation in this study is voluntary. I have the right to refuse to answer any questions or stop the interview and withdraw my consent at any time during the course of the interview.
- I am not receiving any compensation for my participation in this study.
- This research plan has undergone the scrutiny of the Institutional Review Board (IRB) for Protection of Human Subjects - Ferris State University. The researcher has received approval to proceed with this interview research. I have viewed the approval document. I may contact the IRB at Ferris State University should I have concerns. The contact information is as follows:

- 

Dr. Connie Meinholdt, Chair, IRB  
ACS-2072, Ferris State University  
Big Rapids, MI 49307  
(231) 591-2759  
IRB@ferris.edu

---

Subject Signature

---

Date

---

Subject Printed Name



**APPENDIX F**  
**CODING SCHEMA**

## Coding Schema

### *Increasing Efficiencies and Effectiveness in Community Colleges: Program Review, Program Cost Studies, and the Transformative Practices of Leaders in Two Community Colleges*

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*Answered in Descriptive Analysis of Documents and through Interviews:*

1. Social/Cultural/Financial and Economic Drivers of Change:

- Economy - The Recession- change in federal, state, and local economy
- Stakeholder Needs and demands
- Accreditation

2. Length of process development:

- 2-3 years
- 3-5 years

*Answered through Interviews, Surveys and Document Scan:*

3. Transformative Processes

A. Efficiencies

1. **Code:**

**EFC 1**

Brief Definition:

Repurposing of budgets and tuition rates

Full Definition:

Colleges are making changes in their budgets and tuition structures as a result of new processes: program review and budget cost models or cost to educate.

When to Use:

Evidence or discussion on changes that occurred as a result of program review or program cost models on programmatic or college budgets. Discussion on changing tuition rates including differential tuition.

2. **Code:**

**EFC 2**

Brief Definition:

Consolidation/change/creation of academic programs

- Full Definition: Colleges are revitalizing or changing programs based on results from program review or program cost models/cost to educate
- When to Use: Evidence or discussion of new programs/decreased programs or consolidation of programs
- 3. Code: EFC 3**
- Brief Definition: New funding sources (partnerships, consortia)
- Full Definition: Colleges are creating new partnerships or consortia to create or improve new or revised programs as a result of program review or budget cost model/cost to educate
- When to Use: Evidence of discussion of any partnerships, consortia, or other agreements that resulted in different funding models for college programs
- 4. Code: EFC 4**
- Brief Definition: Responsiveness - Time management/time savings
- Full Definition: Colleges show evidence of increased responsiveness in new processes, new curriculum to meet internal and external stakeholder needs resulting in the creation of new programs or revitalizing programs more quickly.
- When to Use: Evidence or discussion of reduced time creating a new program or process improvement as a result of program review or program cost model/cost to educate.
- 5. Code: EFC 5**
- Brief Definition: New or revised processes
- Full Definition: New or revised internal processes were created within the Colleges to improve delivery of programs or services.
- When to Use: Evidence or discussion of changes to internal processes ex: streamlining processes and content

needs for program review and program cost study/cost to educate

**6. Code: EFC 6**

Brief Description: Productivity (Lumina Foundation) – Degrees awarded divided by resources

Full Description: Colleges show evidence of utilizing a productivity equation as defined by Lumina Foundation or describe the combination of college resources and the need to increase the number of college completions

When to Use: Evidence or discussion from increased emphasis on limited resources and increased completion rates

**B. Effectiveness**

**1. Code: EFF1**

Brief Definition: Data utilization

Full Definition: Colleges are increasing their use of data at administrative and programmatic levels to improve programs.

When to Use: Evidence or discussion of new processes or use of data within colleges at the administrative and programmatic levels.

**2. Code: EFF 2**

Brief Definition: Accountability

Full Definition: Colleges are indicating increased pressure to improve their accountability to stakeholders on issues of costs, program success, and college performance. Stakeholders include accrediting bodies, employers, students, media, parents, and other educational partners including secondary and post secondary institutions.

When to Use: Evidence or discussion of increased pressures from key stakeholder groups.

**3. Code: EFF 3**

Brief Definition: Practicality for staff and faculty

Full Definition: Usefulness and application of program review and program cost/cost to educate models for staff and faculty in the management and improvement of their programs

When to Use: Evidence of discussion of faculty utilization and/or changes that were implemented by programmatic staff and faculty

**4. Code: EFF 4**

Brief Definition: Transparency

Full Definition: Colleges demonstrate that key performance measures and their indicators of current and future performance are available for all stakeholders to view and comprehend.

When to Use: Evidence or discussion of processes and improvements resulting in stakeholder access to documents, college dashboards, and other indicators of performance.

**5. Code: EFF 5**

6.

Brief Definition: Value

Full Definition: Colleges have improved the value to internal and external stakeholders as defined by program quality, job placement, graduation rates, affordable tuition, and increased learning competencies for students. Faculty value processes and tools to improve program quality and access to resources.

When to Use: Evidence or discussion of increased need for or proof of value to internal and external stakeholders.

**6. Code: EFF 6**

Brief Definition: Enhanced performance

Full Definition: Colleges and programs have improved their performance based on performance indicators that include increased completion rates, programmatic

When to Use: assessments, reduced costs, and/or employer and community engagement. Evidence or discussion of outcomes from program review/program cost/cost to educate models resulting in improvement in performance in delivery and service of programs.

C. Integration Practices

1. **Code:** **IP1**

Brief Definition: Linked to Strategic Planning

Full Definition: Program review and program cost/cost-to-educate models and their data and findings are utilized and applied in developing and implementing College's strategic plans.

When to Use: Evidence or discussion of examples of utilization of program review and program cost/cost to educate models in strategic planning processes including examples of impact.

2. **Code:** **IP2**

Brief Definition: Linked to Budgeting processes

Full Definition: Program review and program cost/cost-to-educate models and their data and findings are utilized and applied in developing and implementing programmatic and college budgets.

When to Use: Evidence or discussion of examples of utilization of program review and program cost/cost to educate models in college budgeting processes.

3. **Code:** **IP3**

Brief Definition: Linked to Operational Planning

Full Definition: Program review and program cost/cost-to-educate models and their data and findings are utilized and applied in developing and implementing operational planning.

When to Use: Evidence or discussion of program review and program cost/cost-to-educate model findings that specifically link operational planning, i.e. IT, student services.

**4. Code: IP4**

Brief Definition: Cycle of processes

Full Definition: Program review and program cost/cost-to-educate models and their data and findings are being revised as part of Colleges' continuous quality improvement efforts. Processes are reviewed and analyzed as related to other college processes and their timing in the academic year.

When to Use: Evidence or discussion of changing cycles of program review and program cost/cost-to-educate models cycle changes not specifically linked to improved efficiencies.

**5. Code: IP5**

Brief Description: Systemic thinking

Full Description: Program review and program cost/cost-to-educate models and their data and findings are used as models of systemic thinking that have impact and that are linked to other processes, people, and resources.

When to Use: Evidence or discussion of the need or application of systemic thinking as opposed to a direct link to colleges' strategic planning.

#### **4. Leadership Skills & Transformative Practices**

A. AACC Competencies-

• **Organizational Strategy – OA 1-6**

- 1) Assess, develop, implement, and evaluate strategies regularly to monitor and improve the quality of education and the long-term health of the organization.
- 2) Use data-driven evidence and proven practices from internal and external stakeholders to solve problems, make decisions, and plan strategically.

- 3) Use a systems perspective to assess and respond to the culture of the organization; to changing demographics; and to the economic, political, and public health needs of students and the community.
  - 4) Develop a positive environment that supports innovation, teamwork, and successful outcomes.
  - 5) Maintain and grow college personnel and fiscal resources and assets.
  - 6) Align organizational mission, structures, and resources with the college master plan.
- **Resource Management - RM 7-13**
    - 7) Ensure accountability in reporting.
    - 8) Support operational decisions by managing information resources and ensuring the integrity and integration of reporting systems and databases.
    - 9) Develop and manage resource assessment, planning, budgeting, acquisition, and allocation processes consistent with the college master plan and local, state, and national policies. 3
    - 10) Take an entrepreneurial stance in seeking ethical alternative funding sources.
    - 11) Implement financial strategies to support programs, services, staff, and facilities.
    - 12) Employ organizational, time management, planning, and delegation skills.
    - 13) Manage conflict and change in ways that contribute to the long-term viability of the organization.
  - **Communication – COM 14-17**
    - 14) Articulate and champion shared mission, vision, and values to internal and external audiences, appropriately matching message to audience.
    - 15) Create and maintain open communications regarding resources, priorities, and expectations. 4
    - 16) Convey ideas and information succinctly, frequently, and inclusively through media and verbal and nonverbal means to the board and other constituencies and stakeholders. 3
    - 17) Listen actively to understand, comprehend, analyze, engage, and act.
  - **Collaboration – COB 18-21**
    - 18) Embrace and employ the diversity of individuals, cultures, values, ideas, and communication styles.
    - 19) Catalyze involvement and commitment of students, faculty, staff, and community members to work for the common good.
    - 20) Manage conflict and change by building and maintaining productive relationships. 4
    - 21) Develop, enhance, and sustain teamwork and cooperation.
  - **Community College Advocacy CCA 22-25**
    - 22) Value and promote diversity, inclusion, equity, and academic excellence.
    - 23) Demonstrate a passion for and commitment to the mission of community colleges and student success through the scholarship of teaching and learning.



- 24) Promote equity, open access, teaching, learning, and innovation as primary goals for the college, seeking to understand how these change over time and facilitating discussion with all stakeholders.
- 25) Advance life-long learning and support a learner-centered and learning-centered environment.
- **Professionalism PRO 26- 33**
  - 26) Demonstrate transformational leadership through authenticity, creativity, and vision.
  - 27) Understand and endorse the history, philosophy, and culture of the community college.
  - 28) Self-assess performance regularly using feedback, reflection, goal setting, and evaluation.
  - 29) Manage stress through self-care, balance, adaptability, flexibility, and humor.
  - 30) Demonstrate the courage to take risks, make difficult decisions, and accept responsibility.
  - 31) Understand the impact of perceptions, worldviews, and emotions on self and others.
  - 32) Use influence and power wisely in facilitating the teaching-learning process and the exchange of knowledge.
  - 33) Weigh short-term and long-term goals in decision-making.

5. Leadership Styles:

1. **Code:** COB
  - Brief Definition: Collaborative Leadership
  - Full Definition: Leadership attributes and competencies that require a deep understanding and need for human relationships as part of an effective organization.
  - When to Use: Evidence or discussion of the importance of others in designing, planning, and implementing college work with a shared vision and encouragement while empowering others to act for the success of the college.
  
2. **Code:** CON/CUL
  - Brief Definition: Contextual/Cultural Leadership
  - Full Definition: Leadership attributes and competencies that are enmeshed in the college's culture and current context in a manner that is relevant and appropriate for that institution to drive improvement and change.

When to Use: Evidence or discussion of communication or documentation that pertains to a specific college's culture and context. Ex: traditions, and/or symbolism, or events.

**3. Code:** SIT

Brief Definition: Situational Leadership

Full Definition: The ability of academic leaders to demonstrate decision making skills in the present and in multiple, and diverse situations.

When to Use: Evidence or discussion of leadership skills that take into consideration the entire organization while also remaining adaptive or flexible to using different skills to solve different issues or concerns.

**4. Code:** TRANS

Brief Definition: Transformational Leadership

Full Definition: The ability of academic leaders to demonstrate the impact of their decisions and skills on the transformation of the organization.

When to Use: Evidence or discussion of leadership skills that include forward thinking, analytical, actionable, and affirming characteristics that result in the transformation of the college.

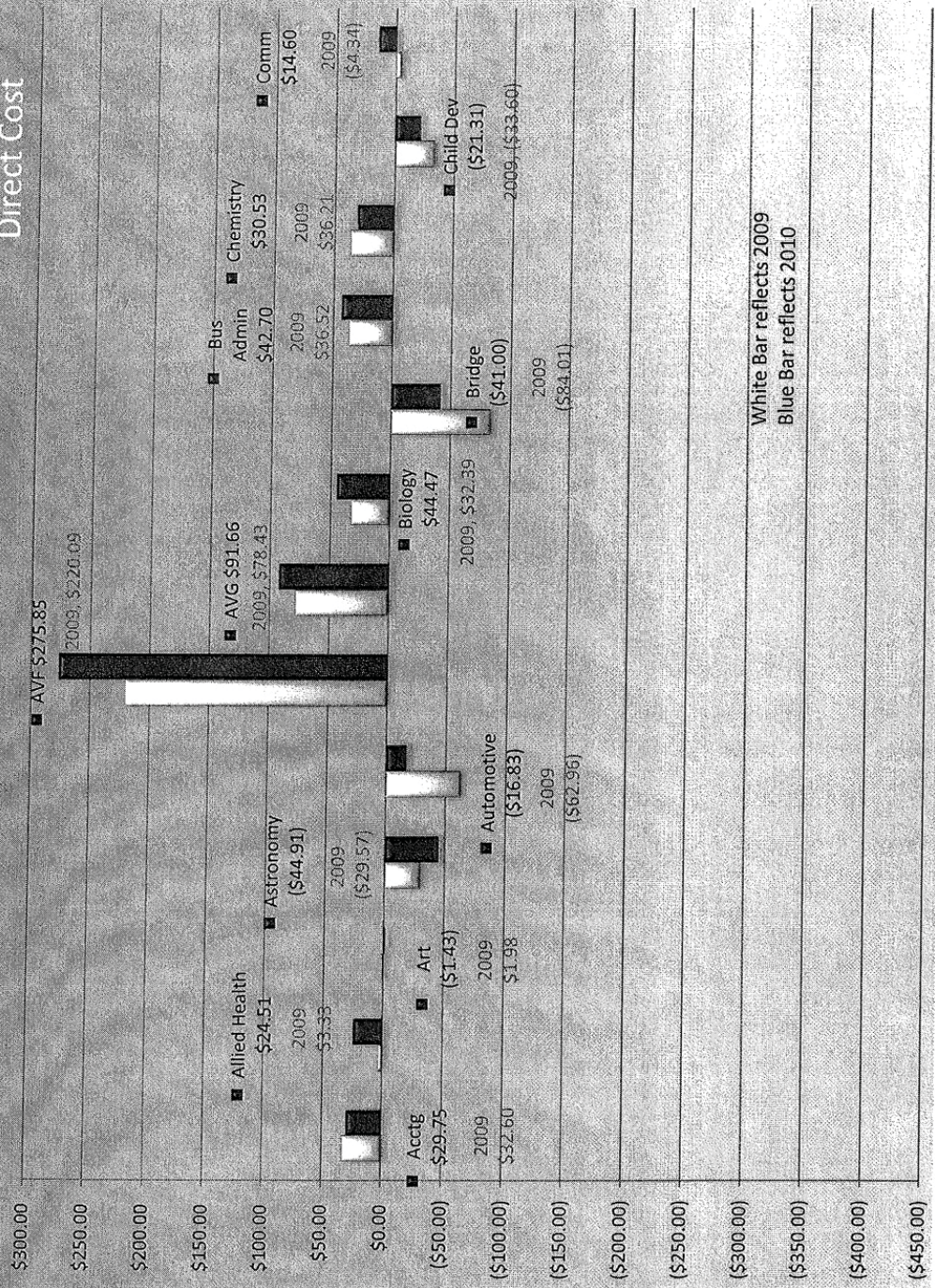
**APPENDIX G**  
**DEVELOPMENTAL CODING SCHEMA**

<b>Developmental Phases of Analytic Framework</b>	<b>Explanation and Description of Resulting Changes to Coding Schema</b>
<p>1. Coding schema developed February 1, 2013. After conducting the relevant literature reviews, the researcher developed an initial literature-based coding framework for the dissertation.</p>	<p>The coding schema, developed as part of the researcher’s initial premise about a conceptual framework was based on Bogdan and Biklen (1998, as cited in Bloomberg and Volpe, 2012) coding categories coding category system of organizing data. Two levels of schema were developed: 1) a general etic level and 2) a more specific, emic level, which was close to the literature review, but aligned to the etic codes. At the outset there were 58 codes</p>
<p>2. After discussion with colleagues, conceptual framework and related schema were revised. Analytic categories directly relate to the study’s three of the research questions. February 3, 2013</p>	<p>The schema is primarily developed from the literature review as well as personal experience. AACC Leadership competencies that are related to the 33-question survey are included in last category on Leadership. 1) Transformative Processes – a) Efficiencies b) Effectiveness, 2) Integration Practices, and 3) Leadership Skills and Transformative Practices. The answers to research question A 1 will be answer in the narrative analysis of the two community colleges in the case study. There are 53 alpha numeric codes</p>
<p>3. After reviewing literature on qualitative analysis, coding schema, and codebook development in alignment with the dissertation questions, the codebook and its definitions for the interviews and document scans were finalized to improve triangulation. February 23, 2013</p>	<p>In addition to the assigned codes, brief definitions and full definitions were created based on the literature. An additional component on each code included “When To Use” to improve clarity and understanding of each code for the researcher. This was based on the premise that “Codes are the building blocks for theory or model building and the foundation on which the analyst’s arguments rest” (MacQueen, McLellan, and Milstein, 1998).</p>

**APPENDIX H**  
**NMC COST TO EDUCATE**

# 2009-10 Cost To Educate Per Contact Hour

## Direct Cost



White Bar reflects 2009  
Blue Bar reflects 2010

**APPENDIX I**

**A3**

**Computer Information Technology – A3 (Infrastructure, Developer, General)**

Program			Infrastructure (I) CIP: 11.0901			Developer (D) CIP: 11.0201			General (G) CIP: 52.1201		
Level of Evaluation	Outcomes	State Baseline*/ NMC Target	08-09	09-10	10-11	08-09	09-10	10-11	08-09	09-10	10-11
Level 1: Learner Perception	Year End Program Enrollment		53	78	113	24	53	57	117	116	135
	Quality of Instruction	85%	86%	86%		← All Programs					
	Overall Quality of Course	85%	83%	83%		← All Programs					
	Learner Program Satisfaction	3.5	N/A	3.5		N/A	3.21	3.1	N/A	3.0	3.11
	Non-traditional Participation (5P1)	24%	N/A	9%		N/A	23%	31%	N/A	N/A	N/A
Level 2: Learning	Course retention rates	91%	84%	87%	90%	← All Programs					
	Course enrollee success rate	77%	64%	67%	71%	← All Programs					
	Course completer success rate	87%	76%	76%	79%	← All Programs					
	Graduate Rate (2P1)	28%	0%	14%		N/A	0%	50%	9%	33%	
	Student Retention or Transfer (3P1)	66%	N/A	85%	81%	N/A	82%	74%	66%	56%	88%
	Non-traditional Completion (5P2)	21%	N/A	0	13%	N/A	N/A	40%	Not Applicable <sup>3</sup>		
Program Outcomes <sup>2</sup>	<b>Outcome</b>	<b>Target</b>	<b>08-09</b>	<b>09-10</b>	<b>10-11</b>	<b>Outcome</b>	<b>Target</b>	<b>08-09</b>	<b>09-10</b>	<b>10-11</b>	
	98-349 MTA Exam	85%	N/A	N/A	N/A	77-881 W	85%	N/A	N/A	N/A	
	98-361 MTA Exam	85%	N/A	N/A	14%	77-887 WE	85%	N/A	N/A	N/A	
	98-362 MTA Exam	85%	N/A	N/A	N/A	77-882 E	85%	N/A	N/A	N/A	
	98-363 MTA Exam	85%	N/A	N/A	50%	77-888 EE	85%	N/A	N/A	N/A	
	98-364 MTA Exam	85%	N/A	N/A	88%	77-883 P	85%	N/A	N/A	N/A	
	98-365 MTA Exam	85%	N/A	N/A	N/A	77-885 A	85%	N/A	N/A	N/A	
	98-366 MTA Exam	85%	N/A	N/A	74%						
	98-367 MTA Exam	85%	N/A	N/A	100%						
98-372 MTA Exam	85%	N/A	N/A	N/A							
Level 3: Skill Transfer	Technical Skill Attainment (1P1)	91%	N/A	N/A	83%	N/A	N/A	100%	N/A	N/A	N/A
	Student Placement (4P1)	54%	N/A	75%	88%	N/A	100%	67%	71%	75%	80%
Level 4: Results <sup>1</sup>	Advisory Group Survey Feedback	3.50	N/A	N/A	3.7	← All Programs (n=11)					
Course Efficiency	Summer		84%	90%		← All Programs					
	Fall	90%	88%	94%	97%	← All Programs					
	Spring		92%	95%	94%	← All Programs					
<b>Color Code Key</b>	N/A	Up from previous year AND above target			Maybe up but below target OR down but above target			Down from previous year AND below target			



**APPENDIX J**  
**CPCC PROGRAM COST STUDY**

**CPC Learning Unit**  
**Updated Program Cost Study to Determine ROI**  
**Fall 2011**

**Background**

The Learning Unit recently updated and expanded a Program Cost Study prepared in 2007-2008 to help determine which academic programs needed to be subsidized, revitalized, consolidated, or retired. Comprehending what a program costs is important to everyone from faculty to program directors to senior administrators. With decreasing budgets, knowing the cost of a program helps prioritize resources during tough economic times and/or make the case for additional funding from external sources in support of high demand/high cost programs. With increasing enrollments, understanding the costs associated with offering additional sections of courses are critical to planning.

**Applying a Business Approach to the Study**

**Task 1:** Using the two-year trend analysis data (2008-09 and 2009-10) for enrollment (FTE's) and the corresponding program costs, programs were plotted into one of four categories in a variation of the Boston Consulting Group's Growth Share Matrix.

↑ FTE Trends ↑	<b>High Demand/Low Cost Programs</b>  Programs with growing enrollments and positive return on investment.	<b>High Demand/High Cost Programs</b>  Programs with growing enrollments and negative return on investment.
	<b>Low Demand/Low Cost Programs</b>  Programs with declining enrollments and positive return on investment.	<b>Low Demand/High Cost Programs</b>  Programs with declining enrollments and negative return on investment.
	← Program Cost Trends →	

**Task 2:** We then determined what objective to assign each program (or cluster of programs) and what support it needed using the following alternatives:

**Subsidize.** The objective is to seek industry support and funding to help underwrite costs.

**Revitalize.** The objective is to identify and invest resources selectively.

**Consolidate.** The objective is to reduce costs by creating efficiencies.

**Divest.** The objective is to divert resources where they can be better used elsewhere.

**Outcomes of the Study**

Sixty-eight percent of the programs generated a positive return on investment in FY09-10. And, seventy-five percent of the programs grew in FTE from 2008-09 to 2009-10. Based on the two-year FTE and Program Cost Comparison Data, the programs were mapped accordingly into one of the following four categories:

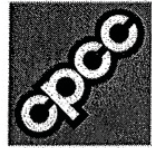
1. High Demand/Low Cost Programs (43 or 50%)
2. High Demand/High Cost Programs (21 or 25%)
3. Low Demand/Low Cost Programs (15 or 18%)
4. Low Demand/High Cost Programs (6 or 7%)

**Uses of the Updated Study**

Program cost data allows the academic administration to:

- compare costs across disciplines
- implement instructional and operational efficiencies to reduce program costs (Business Umbrella Degree Program)
- understand the impact of offering additional sections of specific courses (high demand sections vis a vis Tier 1 funded sections)
- manage enrollment growth (grow FTE and create other revenue-generating opportunities)
- prioritize allocated budget resources (justify hiring needs)
- make the case for seed money from external sources for new programs in Fall 2012 (Pharmacy Tech and Occupational Therapy)
- help evaluate the performance of programs (incorporate into the Program Review process)

**APPENDIX K**  
**PROGRAM REVIEW**



**CENTRAL PIEDMONT  
COMMUNITY COLLEGE**

## **Annual Program Review**

**Instructional Program:**  
*Criminal Justice Technology*  
(A55180)

**Document Prepared By:**  
*Arthur C. Doyle*

**2009 – 2010**

**APPENDIX L**

**NMC AND CPCC FUTURE LEADERSHIP APPROACHES**

## **Leadership skills for the future (From Interview Question) NMC & CPCC**

*“What leadership skills do you think will be necessary to drive changes for the future of your college?”*

### NMC1

- Forward thinking
- To develop multiple scenarios
- Develop solutions based on emerging trends

### NMC 2

- Visionary -Help the institution develop a vision of where it needs to go
- Bring it down a level and help to operationalize the vision. Framing Mean –
- Think quickly on their feet and make connections
- Confidence

### NMC3

- Networking skills – the capacity to understand existing and create new ones
- Foresight
- Using data in a creative and consistent way to understand the circumstances of a program

### NMC4

- To look strategically and long range
- Respect history and the culture but move on and create new forward thinking strategies
- Looking at recent data and determining how technology can solve problems and create solutions

### NMC5

- Vision
- Taking risks and proposing different way of doing things
- Be more aware of what is happening nationally

**Visionary, systemic and agile thinking, framing meaning, and risk taking -Based on Interview Coding: Transformative (100%), Situational (40%), and Collaborative (40%)**

## CPCC 1

- Patience
- Empathy – Shared meaning “Understanding what it is looking like from the other person’s side of the conversation.”
- Clear communication based on clear objectives

## CPCC2

- Collaboration
- Passion
- Trust and verify
- John Wayne Style of Management “Be bold”
- Global partnerships
- Political savvy
- Need to be about quality
- Partnerships with businesses and maybe even competitors
- Agility – doesn’t have to be 100%

## CPCC3

- Patience to work from our successes
- Not be reactive
- Big picture attitude
- Communicating the Big Picture

## CPCC4

- Collaboration
- Getting work done through others
- Agility – “We are building a plane as it is flying.”
- Business approach - return on investment for students

## CPCC5

- Reframing meaning to create ownership
- Referent power
- Visionary

## CPCC6

- Collaboration
- Patience
- Rapid response
- Agility
- Futuristic

## CPCC7

- Understanding cultural diversity and shifting student populations

## CPCC 8

- Financial skills to determine funding models that are more self-supporting
- Political skills
- Staying connected
- Knowing what the changes are and what is driving them
- Big Picture
- Listening and synthesizing
- Asking “How does this apply to us?”

**Collaboration, Agility, Visionary, Framing Meaning, and Patience - Based on Interview coding – Leadership Styles: Collaboration (75%), Transformational (75%) and Situational (37.5%)**



**APPENDIX M**  
**DOCUMENT SUMMARY**