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Labor Market Responsiveness of Washington Community & Technical Colleges

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Labor Market Responsiveness of Washington State Community and Technical Colleges

A dissertation by

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ABSTRACT

Labor Market Responsiveness of Washington State Community and Technical Colleges

by Erin M. Frasier

Purpose: The purpose of this mixed methods study is to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive based on the Community College Labor Market Responsiveness assessment's seven dimensions of labor market responsiveness (leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building, and partnerships) and to explore the factors impacting each of the seven dimensions.

Methodology: This mixed methods study described 39 Washington State community and technical college workforce administrators' perceptions of community college labor market responsiveness. An explanatory design was employed to collect quantitative data to describe, followed by qualitative data to further explain. Data was collected using a web-based survey instrument with fixed-choice Likert-type and open-ended questions.

Findings: Overall, 62% of workforce educational administrators perceive the community colleges in Washington to be somewhat or almost always labor market responsive. The two most displayed dimensions were leadership and governance and organizational culture, however, the weakest dimension was organizational structure. The most impactful factors identified were: resources, leadership, workforce focus, organizational factors and external engagement. An unexpected finding was the absence of the

practitioners' reference to entrepreneurial characteristics, even though this is emphasized by scholars.

Conclusions: Washington State community and technical colleges are experts in workforce development although many factors impact their ability to effectively respond to labor market needs. This study concludes that Washington State community and technical colleges are perceived to be moderately labor market responsive, yet committed to external relationships and partnerships, and in need of more adequate financial, human and information resources to reach their full potential. Secondly, although there is strong leadership supporting labor market responsiveness efforts, unsupportive organizational structures limit their impact. In addition, entrepreneurial approaches are necessary to navigate resource-limited environments and this is not adequately supported by community colleges.

Recommendations: Further research is recommended to include other populations, correlate perceptions with other indicators, and compare perceptions between more than one sample. An exploration of entrepreneurial characteristics and vocational program review processes of community colleges should also be studied.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

"Now is the time to build a firmer, stronger foundation for growth that will not only withstand future economic storms, but one that helps us thrive and compete in a global economy. It's time to reform our community colleges so that they provide Americans of all ages a chance to learn the skills and knowledge necessary to compete for the jobs of the future."

– President Barack Obama

The United States' ranking in the world economy and the country's vitality has been seriously challenged by globalization and technological advancements that require new and ever changing workforce skillsets to fill job placement demands of evolving trades (Carnevale, Smith, & Strohl, 2010; Dar, 2013; Edwards, 2013; Harpine, 2013; Kasper, 2009; Levin, 2005; Mars & Metcalf, 2009a; Soares, 2010). Even as unemployment rates decrease in the aftermath of the Great Recession, employers continue to report extensive numbers of unfilled positions as a result of inadequately skilled job seekers (Bradley, 2012; Edwards, 2013; González, 2012; Kress, 2012; McKernan, 2015; Mourshed, Farrell, & Barton, 2012; Wilson, 2014; Wright, 2015). President Obama has set a goal for community colleges to graduate an additional five million skilled workers by 2020 to increase America's strength in the world economy (The White House, 2009). In this current environment, community colleges are receiving heightened attention for their expected pivotal role in workforce development and, as a result, the nation's economy (ACT, 2012; Boggs, 2010; Bradley, 2012; Githens, Sauer, Crawford, & Wilson, 2012; González, 2012; Lebesch, 2012; Shaffer, 2012; Soares, 2010).

Originally, community colleges were created to provide the first two years of a four-year academic-focused degree and the term community college was first introduced

by the Truman Administration in 1947 to focus on providing greater access to education in the local communities (Ayers, 2010; Boggs, 2010). However, the mission of the community college has evolved to emphasize workforce education as a result of responding to the need to train veterans returning from World War II, the large population of baby boomers and a need for a skilled workforce for a continuously changing economy (Boggs, 2010; Leigh & Gill, 2007; Mars, 2013). Starting with the Vocational Education Act of 1963, additional emphasis was directed toward workforce education once funding was allocated to community colleges for this purpose (Bragg, 2013). Today, workforce education is a common and accepted pillar of community college missions (Leigh & Gill, 2007; Mars, 2013). This evolution of the community college mission reinforces the expectation of their role in workforce development.

Background

In the current state of workforce development efforts, there are many factors contributing to the increased expectation for community colleges to play a pivotal role. Federal legislation and messaging clearly identifies community colleges as the key to developing the skilled workforce necessary to meet industry needs. Multiple funding streams also steer community colleges to respond to labor market needs. Likewise, the need for community colleges in Washington State to respond to labor market needs is also quite evident in terms of demonstrated skills gaps and their role in workforce and economic development partnerships. Yet, even though the need for community colleges to be labor market responsive is evident, there has been little research completed to identify the dimensions of labor market responsiveness necessary, aside from the U.S. Department of Education's Community College Labor Market Responsiveness (CCLMR)

2

Initiative in 2002. Each of these factors are discussed below and together present the current state of workforce development and the need for further research concerning the labor market responsiveness of community colleges.

Workforce Education as Federal Expectation

The Obama Administration has made great effort to emphasize the community college's workforce development role in the economic recovery of the nation (Boggs, 2010; Soares, 2010; The White House, 2009). In 2014, the passing of the Workforce Innovation and Opportunity Act (WIOA) marked the first federal reform of the workforce system in 15 years ("H.R. 803," 2014; Workforce Training and Education Coordinating Board, 2014). Washington's Workforce Training and Education Coordinating Board (2014) states "the goal of WIOA is to improve the quality of the workforce, … increase economic self-sufficiency, meet skills requirements of employers, and enhance the productivity and competitiveness of the nation" (p. 2). Workforce education and training are a core element of WIOA and community colleges are called upon to fulfill a role in the state's plan to implement this act (Workforce Training and Education Coordinating Board, 2014). Along with the signing of WIOA, Vice President Biden also released a Ready to Work: Job-Driven Training and American Opportunity report outlining 50 actions the Obama administration will implement to increase workforce skills and emphasizes the role of community colleges in delivering training for in-demand jobs (The White House, 2014). This heightened focus on community colleges requires they be prepared to meet workforce development needs.

Funding Opportunities Tied to Workforce Education

Recently, President Obama unveiled two new funding opportunities for community colleges focused on workforce education with requirements for meeting the demands of the labor market (The White House, 2015). The America's College Promise will allow community colleges to waive tuition if they, in part, are able to demonstrate their occupational training programs meet employer demands and the American Technical Training Fund will provide revenue for workforce education programs aligned with industry needs (The White House, 2015). These funding opportunities arise at a time when previous federal funding streams for workforce education have been discontinued (Bradley, 2012) and community colleges continue to navigate reductions in state funding (Lassiter, 2013; Park, 2012; Weidner, 2010). In an environment of continuously limited resources and a state and federal focus on workforce education that include mandated requirements, community colleges must be responsive to the labor market to ensure financial sustainability.

Heightened Need for Labor Market Responsiveness in Washington State

The Washington State community and technical college system is essential to the economic vitality of Washington State and a prime case study for the rest of the nation. It is located in an economic environment ranked 14th in the nation for gross domestic product and 13th in the nation for population size (U.S. Department of Commerce, 2015). The state's multitude of industry sectors with continuingly changing skill requirements has brought added state government focus to the heightened federal emphasis of their role in workforce development. As of the end of 2014, Washington State's unemployment rate of 6.2% was higher than the national average with over 217 thousand people still on

unemployment (Washington State Employment Security Department, 2016). However, employers are reporting they have unfilled positions because applicants do not possess the minimum skill qualifications (Bradley, 2012; Cappelli, 2014; González, 2012). A joint report by the Washington Student Achievement Council, Washington State Board for Community and Technical Colleges, and Washington Workforce Board (2013) identifies a heavy reliance on in-migration, which are "workers trained in other states and nations to meet the needs of the economy" (p. 12). This report also identifies "demand significantly exceeds supply in several occupations, including … widening supply-demand gaps in the fields of manufacturing and production" (p. 4). In addition, due to several state and federal mandates and funding opportunities colleges must acknowledge the expectation to be responsive to the needs of local industry (Boggs, 2010; Soares, 2010; The White House, 2015). More information is needed to determine the readiness of Washington State community colleges to be labor market responsive in order to meet growing expectations and assist in establishing economic vitality for the state.

In addition to providing a prime environment to further study the labor market responsiveness of community colleges, it is critical that the Washington State community college system be prepared to meet the challenge of contributing to the economic recovery of the state. It is a core partner in the development and implementation of the state's WIOA plan and must be prepared to contribute immediately upon plan approval in 2016. To further add challenge to this environment, there will continue to be increased competition from training providers external to the community college system (Mellow & Heelan, 2015; Shaffer, 2012). If community colleges are to continue to be a core partner in workforce development for the state, they must assess their labor market

responsiveness and implement strategies for improvement where needed. Therefore, within this environment of federal and state pressures to contribute to economic development, it is critical to identify both the current level of labor market responsiveness of the Washington State community colleges and identify factors that are impacting their ability to be responsive.

CCLMR Initiative

Very little attention has been provided to assessing the labor market responsiveness of community colleges, aside from a study conducted in 2002 by the U.S. Department of Education under the CCLMR Initiative. The objective of the initiative was described by the U.S. Department of Education (2004) as providing "information and tools that will enable community colleges, as a unique component of America's education and training system, to keep pace with the needs of…a dynamic labor market and design programs and services that promote…economic competitiveness." (2004, p. para. 2). As a result of studying factors that support labor market responsiveness at 10 labor market responsive community colleges throughout the nation, seven dimensions of labor market responsiveness were identified: (a) leadership and governance, (b) organizational structure and staffing, (c) organizational culture, (d) resources and funding, (e) information and data use, (f) relationship building, and (g) partnerships (MacAllum, Yoder, & Poliakaff, 2004b). Leadership and governance provides the foundation for supporting all of the other six dimensions and must include a workforce development mission and vision (MacAllum et al., 2004b). Organizational structure and staffing reflects the workforce development mission of the college and workforce and continuing education departments are in equal placement with traditional academic

transfer departments (MacAllum et al., 2004b). The organizational culture of the

institution is accepting of market responsive actions and services, including a more

entrepreneurial approach to educational programming (MacAllum et al., 2004b).

Resource and funding sources are more diversified and do not depend primarily on state

funding (MacAllum et al., 2004b). Information and data is collected, accurate and used

for strategic planning, and particular attention is paid to local labor market information

(MacAllum et al., 2004b). Relationship building with an extensive network of

community-based, workforce development, economic development, educational,

government, business and labor representative partners is given the highest priority

(MacAllum et al., 2004b). And partnerships are established and maintained based on

strategic analysis of priorities and future labor market trends (MacAllum et al., 2004b).

Together, these seven dimensions of labor market responsiveness provide a framework

for assessment of community colleges and developing strategies to improve their labor

market responsiveness.

<div align="center">**Statement of the Research Problem**</div>

In response to the challenges faced by the nation to attain economic recovery in

the aftermath of the Great Recession and maintain economic vitality within the global

economy, the expected role of community colleges in workforce development has been

greatly emphasized by federal and state administrations (Boggs, 2011). However, even

though community colleges are community-based, it is not so clear whether they are

responsive to local needs (Coleman, 1999; Couturier, 2005; Hoffman, 2013; Leigh &

Gill, 2007). Unfortunately, current scholarly discourse questions whether community

and technical colleges are actually responsive to labor market needs and highlights

uncertainty as to what factors impact their effectiveness. Therefore, the ability to assess and strategically increase the labor market responsiveness of community colleges is lacking, yet essential to impacting the nation's economic stability.

To strengthen community colleges' abilities to meet industry needs, further research is necessary to identify both the current responsiveness levels and the factors impacting responsiveness. Aside from the U.S. Department of Education's CCLMR Initiative, there have been few studies specifically focused on the labor market responsiveness of community colleges. The CCLMR study is the most recent national effort to identify supporting indicators of labor market responsiveness in community colleges (U.S. Department of Education, 2004), and only four studies conducted within the last seven years have provided further focus on the labor market responsiveness of community colleges (Adams, 2008; Bheda, 2013; Lavendar, 2007; Shipway, 2009).

Each of these studies contributed to identifying the current need for further research. Bheda (2013) strived to define and operationalize responsiveness in order to develop a framework for practitioners to analyze and improve their responsiveness, and although this is the most recent contribution to the literature, application of the framework did not occur. Lavendar's (2007) research focused on community college partnerships with industry, which is only one dimension of labor market responsiveness. To expand upon this research, Lavendar (2007) recommended "research on characteristics of a market responsive community college" (p. 126). Adams' (2008) contributions addressed these recommendations by assessing community college labor market responsiveness with a modified version of the CCLMR assessment that gave emphasis to both external and internal factors. And finally, Shipway (2009) conducted a

labor market responsiveness study based on perceptions of presidents of the 10 community and technical colleges in West Virginia utilizing the CCLMR assessment. Shipway (2009) recommended further research using a sample from a larger state and using both qualitative and quantitative research methods. Therefore, based on Shipway's recommendations, this study will focus on Washington State's community college system and its labor market responsiveness using both a quantitative and qualitative research design.

Purpose Statement

The purpose of this mixed methods study is to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive as measured by the seven dimensions of the CCLMR assessment (leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building, and partnerships). A secondary purpose of this study is to explore the factors that hinder or enhance the seven dimensions of a community college's labor market responsiveness.

Research Questions

1. To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's seven dimensions of labor market responsiveness?

   a) leadership and governance

b) organizational structure and staffing

c) organizational culture

d) resources and funding

e) information and data

f) relationship-building

g) partnerships

2. What factors hinder or enhance a community college's labor market responsiveness as perceived by Washington State workforce education administrators?

Significance of the Problem

As community colleges continue to receive more attention for their role in economic development within the United States there will be an increased expectation of their labor market responsiveness. Within the last decade there has been little discourse about the internal characteristics required for community colleges to meet this need. This study attempts to build upon the foundation of knowledge established by the U.S. Department of Education's CCLMR initiative by examining the seven dimensions of labor market responsiveness through the perceptions of administrators within a larger community college system. Findings will provide further insight into the strength of the model as well as the current degree of labor market responsiveness of the community colleges within Washington State. This study's literature review will also contribute to the discourse on the importance of the community college's role in economic development for the nation.

This study has the potential of providing several tools to assist college administrators in fulfilling their role in workforce development. A framework is presented for colleges to assess their internal dimensions of labor market responsiveness and identify areas needing refinement. The characteristics identified within each dimension can also be utilized by community college administrators as benchmarks for success and assessment results can be used for strategic planning (Shipway, 2009). The focus on leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building, and partnerships can guide colleges to "reflect on the internal structures, policies, and practices that inhibit and promote responsiveness" (MacAllum, Yoder, & Poliakaff, 2004d, p. vi). These tools will assist college administrators in better preparing their institutions to fulfill their role in workforce development.

There is an increased focus from policy makers within the United States, especially the Obama Administration, on workforce development as a strategy for economic recovery and vitality. This study may provide current information on the ability of community colleges to fulfill their expected roles within this strategy. It may also highlight areas of needed support to increase community college's ability to be labor market responsive. In addition, local policy makers within Washington State are tasked with implementation of federal workforce development mandates and may benefit from increased information about the current state of the community colleges in their system. As the role of community colleges in the economic vitality of our nation gains more attention, policy makers will benefit from increased research concerning the internal characteristics required for community and technical colleges to be responsive. They will

11

specifically benefit from understanding resource gaps impacting a college's responsiveness and can redesign funding models to compensate. In addition, they will be able redesign federal and state workforce development policies to support best practices identified from a systemic assessment.

Definitions

The following definitions are provided to ensure standardized comprehension of concepts and terms throughout this study. All definitions were developed with consideration of findings from a review of related theoretical and practical discourse.

Community College: The term 'community college' will be used to refer to both the community colleges and technical colleges in the Washington State Community and Technical College system. The Revised Code of Washington (RCW 28B.50.030 and 28B.50.020) defines 'community college' as two-year institutions of higher education receiving state funding. This includes both the community colleges and technical colleges that comprise Washington State's system.

Internal Factors (of Labor Market Responsiveness): Elements of college operations that must be managed to promote responsiveness, particularly leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building and developing and maintaining partnerships (MacAllum, Yoder, & Poliakaff, 2004a).

Labor Market Responsive Community College:

A labor-market-responsive community college delivers programs and
services that align with and seek to anticipate the changing dynamics of
the labor market it serves. These programs and services address the

educational and workforce development needs of both employers and

students as part of the college's overall contribution to the social and

economic vitality of its community. (MacAllum et al., 2004b, p. 5)

Workforce Education Administrator: All community college administrators

responsible for management of workforce development programming and economic

development partnerships, including contract training, professional and technical

education certificate and degree programs, credit or non-credit short-term employability

skills training, and outreach to small businesses and economic development partners

(Mars, 2013).

Delimitations

The findings of this study are delimited by two conditions necessary for

effectively managing the scope of the research. First, labor market responsiveness will

be studied within community colleges in Washington State. And second, the sample will

include community college personnel with job responsibilities connected to workforce

education.

Organization of the Study

The remainder of this paper will provide further details about the background,

research design, findings and conclusions of this study. Chapter II presents a review of

current and related discourse and research concerning the internal factors of labor market

responsiveness of community colleges. Chapter III describes the methodology and

procedures used to collect research data for this study. Data analysis results and findings

will be presented in Chapter IV. And finally, Chapter V will provide a summary of the

study's findings, and present conclusions drawn and recommendations for further study.

CHAPTER II: REVIEW OF THE LITERATURE

Chapter II presents a review of the literature related to the labor market responsiveness of community colleges. First, a review of the literature addressing the ability of community colleges to be labor market responsiveness is investigated. The body of the review is focused on current discourse related to the seven dimensions of labor market responsiveness prescribed by the U.S. Department of Education's CCLMR initiative findings. A summary of the literature review is also provided (see Appendix A).

Review of the Literature

There is no doubt community colleges are playing a role in the economic development of the nation (Ayers, 2010; Boggs, 2010; Couturier, 2005; Githens et al., 2012; González, 2012; Kasper, 2009; Kolesnikova, 2009, 2010; Lebesch, 2012; Nickoli, 2013; Treat & Hagedorn, 2013; U.S. Department of Education, 2004). Unfortunately, current scholarly discourse questions whether community and technical colleges are actually responsive to labor market needs and highlights uncertainty as to what factors impact their effectiveness. Some proclaim community colleges are quick to respond to labor market needs (Boggs, 2010), but that message seems to have transitioned to stating community colleges *may* be in the best position to aid economic recovery through labor market responsiveness (Githens et al., 2012; Harpine, 2013; Jacobs, 2014; Mars & Metcalf, 2009a; Woodland & Parsons, 2013). Similarly, some emphasize the positive attributes of community and technical colleges to work with industry and be flexible to change (Boggs, 2010; Economic and Revenue Forecast Council, 2014; Githens et al., 2012; Harpine, 2013; Jacobs, 2014; Mars & Metcalf, 2009a; Nielsen, 1994; Woodland &

Parsons, 2013). In addition to those optimistic about the readiness of community

colleges to meet labor market needs, many argue there is a critical need for a foundational

transformation before they are ready to meet the challenge (Alfred, 2012; Bailey &

Jacobs, 2009; Bradley, 2012; Richburg-Hayes, Armijo, & Merrill, 2013; Riggs, 2009;

Romano & Dellow, 2009). Others argue that the traditional academic structure, funding

constraints and culture of the community college prevents it from being responsive to

labor market needs in a timely manner (Alfred, 2012; Bradley, 2012; Richburg-Hayes et

al., 2013; Riggs, 2009; Romano & Dellow, 2009). Bailey and Jacobs (2009) believe

colleges can be responsive, "but the ambitious goals set for them by the [federal]

administration, [and] state governments…can only be realized if the colleges and the

states that fund and regulate them can bring about some fundamental changes" (p. 19).

For fundamental changes to occur agreement must be met on the need to strengthen

community colleges' ability to be responsive to industry needs and knowledge must be

sought concerning factors that impact characteristics of responsiveness.

Unfortunately, there is little discourse specifically addressing 'labor market

responsiveness of community colleges,' especially identifying the internal factors that

enhance or hinder a community college's ability to be labor market responsive.

However, many internal factors of a community college's responsiveness are individually

addressed in the literature and will be aggregated for each variable for the body of this

literature review.

<div align="center">

CCLMR Initiative

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Although current discourse does little to directly identify whether community

colleges are labor market responsive or clarify what internal characteristics support their

responsiveness, a prior model of labor market responsiveness is available. In 2002, the

U.S. Department of Education enacted the CCLMR Initiative to conduct research to

identify supporting indicators of labor market responsiveness in community colleges

(U.S. Department of Education, 2004). An extensive literature review was conducted of

over 200 sources to begin to identify characteristics of a responsive college. In addition,

a nation-wide case study of market-responsive community colleges was conducted to

finalize determination of key characteristics. The result of this research provides a

prescription for seven dimensions of labor market responsiveness: (a) leadership and

governance, (b) organizational structure and staffing, (c) organizational culture, (d)

resources and funding, (e) information and data use, (f) relationship building, and (g)

partnerships. The findings were intended to offer practical guidance to community

colleges in making internal changes to enhance their labor market responsiveness

(MacAllum, Yoder, & Poliakaff, 2004c).

Seven Dimensions of Labor Market Responsiveness

To be effective in their workforce development role, community colleges must be

responsive to the needs of the labor market. To fulfill this role, Alfred (2012) believes:

> for institutions and leaders this will mean innovation—finding new and
>
> better ways of delivering service…[and] doing things that were heretofore
>
> considered unpalatable: changing the business model, procuring
>
> significant private sources of funding, redesigning organizational
>
> structure, collaborating with competitors, reengineering culture,
>
> streamlining systems and processes, and learning how to change through
>
> substitution. (p. 112)

This requires the colleges to develop characteristics that allow them to be responsive, especially within the CCLMR Initiative's identified dimensions of leadership and governance, organizational structure, organizational culture, resources and funding, information and data use, relationship building, and partnerships (MacAllum et al., 2004c; Shipway, 2009). Figure 1 presents a model of labor market responsiveness based on the CCLMR findings. Each of these seven dimensions will be reviewed in respect to both the initial research findings and current literature addressing different internal factors of labor market responsiveness.

Figure 1. Conceptual model of the seven internal dimensions that impact the labor market responsiveness of community colleges. Adapted from "The 21st-Century Community College: A Strategic Guide to Maximizing Labor Market Responsiveness," by K. MacAllum, K. Yoder, and A. R. Poliakoff, 2004. Washington D.C,:U.S. Department of Education, Office of Vocational and Adult Education.

Leadership and Governance

The CCLMR Initiative reported that leadership was the predominant key to a labor market responsive community college (MacAllum et al., 2004c). For community college leaders to navigate the current economic environment, Alfred (2012) offers the following description of necessary leadership skills:

> Leaders in an era of rising demand and reduced resources need to become adept at doing more with less. They will need to generate new sources of revenue to support growth, increase the capacity and productivity of staff, win the war for talent with fast-moving rivals, build cultures that embrace innovation and change, and create networks that enable institutions to pursue opportunity. They will be challenged to develop new organizational designs to get in front of change, and they will need to think differently about organizational success. (p. 116)

This description highlights several themes within the current literature concerning leadership and governance needs for an evolving community college structure. Along with identifying leadership as the most important factor contributing to a labor market responsive community college, the CCLMR Initiative produced five themes of leadership and governance: (a) locus of leadership, (b) mission priority and vision, (c) economic and market trend knowledge, (d) strength in public relations and resource acquisition, and (e) proactive leadership characteristics (MacAllum et al., 2004c). Each of these themes will be presented below along with contributing discourse from current literature.

Locus of leadership. Community college leaders must create an inclusive governance structure and not lead the institution in isolation (MacAllum et al., 2004c).

This requires dispersing leadership responsibilities throughout the institution and including workforce-focused and visionary thinkers in the governance structure (Harpine, 2013; MacAllum et al., 2004c). This includes the heightened responsibility assigned to the college board of trustees to ensure the mission and resource allocations reflect commitment to local workforce development needs (MacAllum et al., 2004c). In addition, an organizational culture must be created that produces results and is supported by the leadership (Alfred, 2012; Connors & Smith, 2011). This includes implementing professional development opportunities and acknowledging risk-takers (Hines, 2011; MacAllum et al., 2004c).

Mission priority and vision. Community college leaders must be dedicated to the needs of the labor market and ensure alignment of the college's mission to their role in economic development (American Association of Community Colleges, 2012; Leigh & Gill, 2009; MacAllum et al., 2004c; Mars & Ginter, 2012). This includes understanding their broader role in economic development in addition to responding to local needs and requires the inclusion of either the term *workforce development* or *economic development* in the college's mission statement (American Association of Community Colleges, 2012; Hillman & Orians, 2013; Rubenzahl, 2014). In general it is understood that "embedded in the mission of community colleges is the intent to provide career development, workforce training and continuing education for the communities colleges serve" (Thornton & Brattebo, 2009, p. 11). Yet the mission is most effective at aiding in college responsiveness if it is formalized in writing and vocalized (MacAllum et al., 2004c). Goals related to workforce and economic development must also be in writing and incorporated into the institution's strategic plan (MacAllum et al., 2004c). Yet, in

response to the increased focus on a labor market responsive mission, some contend that colleges are supporting this mission "at the expense of other missions, in order to maintain legitimacy in the broader political economy" (Levin, 2005, p. 15) and in alignment with resource dependency theory (Meier, 2013). However, college leaders must not only ensure that the mission is understood and upheld, but that it is also aligned with the need to find alternative funding streams and resources (Alfred, 2012; Hines, 2011; Meier, 2013; Nielsen, 1994).

In addition to a workforce development mission, community college leaders must communicate a strong systemic vision of the community college's role in economic development (MacAllum et al., 2004c). Many are in agreement that this requires the leader to be inherently visionary or futuristic (Alfred, 2012; Hawkins, 2009; Hines, 2011; Kouzes & Posner, 2012) and Alfred (2012) contributes the following conceptualization of a visionary leader for community colleges:

> Effective leaders generate visions for the institution, which involve creating a compelling image of the future and a college's place in the future—what it could be and, more important, what it should be. Leaders skilled at visioning are able to get staff excited about the future. They use stories and metaphors to paint a vivid picture of what a college could be, even if they don't have a clear plan for getting there. (p. 117)

A visionary community college leader is entrepreneurial in their ability to recognize and take advantage of new opportunities (Amey, 2013). They understand the role of capitalism in meeting business and industry needs and in sustaining and progressing their institutions (Harpine, 2013). The community college leadership is

accountable to the community it serves to evolve its offerings to meet the skill needs of the future (Mendoza, 2012). In addition, the vision of labor market responsiveness must be shared by the entire institution and leadership must consistently refer to this vision to gain and maintain commitment (MacAllum et al., 2004c). Overall, the vision must be broader than the traditional conceptualization of community college services and incorporate an understanding of the economic and political environment beyond the local service area (MacAllum et al., 2004b).

Economic and market trend knowledge. For community colleges to be labor market responsive, their leaders must be dedicated to staying informed concerning local economic and labor market information (MacAllum et al., 2004b). It is their responsibility to understand the industry needs within their local service area (González, 2012; Kress, 2012; Lebesch, 2012). Yet, they must also be aware and understand regional, national and even global economic trends in order to truly understand their local labor market and the future skills that are required, as the local market does not exist in isolation (MacAllum et al., 2004c; Treat & Hagedorn, 2013). Without an understanding of labor market trends community college leadership cannot accurately envision future skill needs, nor navigate the institution in the necessary direction to meet local needs (American Association of Community Colleges, 2012, 2014; MacAllum et al., 2004c).

Public relations and resource allocation. Community college leaders must demonstrate effective public relations and resource acquisition attributes (MacAllum et al., 2004c). Specifically, the president is the face of their college and "enhancing public respect for the college and recognition of its contributions helps ensure that it is regarded as a key partner in local economic development" (MacAllum et al., 2004c, p. 5).

Collaboration and establishing relationships with various external partners is essential (American Association of Community Colleges, 2005; Amey, 2013; MacAllum et al., 2004c). It is also essential that the college's board of trustees advocate for the workforce development mission of the institution and enhance public relations (MacAllum et al., 2004c). In addition, it is necessary for all staff with outreach roles to be skilled in public relations and resource acquisition, especially to develop partnerships through a systemic mindset (Amey, 2010; Woodland & Parsons, 2013). This external focus and seeking alternative revenue generation by leadership is an entrepreneurial characteristic and can be viewed as unaligned with more traditional models of academic institutions (Amey, 2013). Yet, the most labor market responsive community colleges see the majority of their resource acquisition and relationship development as a result of the effective public relations of their president and board members (MacAllum et al., 2004c).

Proactive leadership characteristics. Labor market responsive community college leaders must have the personal qualities of a proactive leader, including "anticipatory thinking and planning, innovation, and entrepreneurship" (MacAllum et al., 2004c, p. 7). Although there may not be too many education administrators with entrepreneurial traits at this time (Hentschke & Caldwell, 2005; O'Banion, Weidner, & Wilson, 2010), the acceptance and promotion of entrepreneurial attributes in community college leaders is growing in popularity (American Association of Community Colleges, 2012; Cejda & Jolley, 2014; Harpine, 2013; MacAllum et al., 2004c).

Discourse concerning community college leadership competencies has also evolved to reflect entrepreneurial characteristics. The American Association of Community Colleges (2005) (AACC) presented *Competencies for Community College*

Leaders in response to a shortage of community college leaders with adequate skills and presented six competencies: (a) organizational strategy, (b) resource management, (c) communication, (d) collaboration, (e) advocacy, and (f) professionalism. This report highlighted numerous entrepreneurial characteristics, including the support of an innovative culture, seeking alternative funding, and leveraging through partnerships. During this same time period, Hentschke and Caldwell (2005) identified the following aptitudes for an entrepreneurial leader in a non-profit higher education institution: financial management (coherent business plan, finding and maintaining funds, and spending wisely); communication skills (to persuade and motivate others); ambition, perseverance; and decisiveness. Boggs (2012) reemphasized the AACC's competencies of communication, resource management and advocacy as essential for community college leaders navigating the challenges and pressures of a post-recession environment. Yet, while maintaining the importance of all six of the AACC's competencies, Eddy (2012) reorganized them into four categories to better conceptualize competencies in the following clusters: (a) inclusivity (communication and collaboration), (b) framing meaning (organizational strategy, communication, collaboration and advocacy), (c) attention to the bottom line (resource management, organizational strategy, and advocacy), and (d) systems thinking (organizational strategy, communication, and professionalism). In addition to the entrepreneurial characteristics already included in the AACC competencies, the 'attention to the bottom line' cluster gave further emphasis to an entrepreneurial approach to generating and managing resources (Eddy, 2012).

The ability to be labor market responsive depends partially on resources, and resources depend on the ability of its leaders to identify and secure opportunities to leverage resources and strategically navigate change while surrounded by increasingly competitive rivals (Alfred, 2012). Amey (2013) describes the characteristics required of a community college leader in this ever-changing and resource limited environment:

> [L]eaders need to think more complexly and in more nuanced ways, scratching beneath surface observations to work from multiple perspectives, with multiple lenses, and questioning embedded assumptions and institutionalized practice to unearth the 'why' of the college's practice and not just the outputs that are tied to accountability and accrediting agencies. (p. 147)

Proactive leadership also ensures a safe environment for experimentation and risk taking and empowering others to contribute (Hentschke & Caldwell, 2005; Kouzes & Posner, 2012; MacAllum et al., 2004c). Proactive leaders create a culture of innovation (Connors & Smith, 2011). However, foundationally, it is the passion for workforce development and desire to meet the needs of the communities they serve that proactive leaders contribute to labor market responsive institutions (MacAllum et al., 2004c).

Organizational Structure and Staffing

The CCLMR Initiative reported the impact of leadership will be limited unless an appropriate organizational structure is in place (MacAllum et al., 2004c). MacAllum et al. (2004c) emphasized that "college leaders must identify the ways that the institution's organizational structure limits its capacity for economic and workforce development and then remove these organizational barriers to labor market initiatives" (p. 11). Areas of

organizational structure that impact labor market responsiveness include: (a) equality between workforce education and other academic divisions, (b) consolidated workforce services, (c) bridging credit and non-credit programming, and (c) staffing to fulfill the workforce mission (MacAllum et al., 2004c). Each of these structural elements is addressed below.

Equality between workforce education and academic divisions. There is ongoing controversy concerning the level of equality granted workforce education in relation to traditional academic programs (Bailey & Belfield, 2013). Although many recognize the workforce development role of the community college has been a part of their mission (Mars, 2013; Treat & Hagedorn, 2013), academic transfer programs are recognized by many as the primary function of the community college (Kolesnikova, 2010) and their divisions given higher standing in the institution. However, it is quite clear that workforce education is an essential function of today's community colleges (Boggs, 2010; Kolesnikova, 2010; Leigh & Gill, 2007; Mars, 2013). Labor market responsiveness requires a reflection of equality between workforce and academic divisions of education, and their administrators, and this can be foundationally established through an organizational chart that reflects the workforce education mission of the college (MacAllum et al., 2004c).

Consolidated workforce services. College services for workforce education and economic development for businesses and industry are dispersed throughout community colleges, yet the most labor market responsive institutions consolidate these services (Lorenzo, 2013; MacAllum et al., 2004c). At a minimum, establishing a single contact person or department for economic development partners, business and industry

enhanced the promotion and efficient delivery of services (ACT, 2012; MacAllum et al., 2004c). However, the more consolidated actual services become the more effective the institution is at serving students and leveraging resources to better meet the needs of the community (ACT, 2012; MacAllum et al., 2004c).

Bridging credit and non-credit programming. Normally, credit and non-credit programming are separated within community colleges because they have differing funding models and state regulations (MacAllum et al., 2004c). Yet, non-credit programming will continue to increase in viability as community colleges utilize them to meet labor market needs (Noy & Jacobs, 2009). As a result, in some cases, credit program faculty perceive non-credit offerings as competing with credential and degree programming (MacAllum et al., 2004c; Mendoza, 2012). And some argue that non-credit programming divisions should remain independent in order to maintain their ability to be flexible, customizable and quick to respond in the absence of credit programming regulations (Harpine, 2013). Although integration between non-credit and credit programming is rare, the CCLMR Initiative reported on the impact integration had on a community college's labor market responsiveness:

> [M]any labor-market-responsive community colleges appear to invest
> great effort in blurring or at least collaborating across these lines,
> regardless of state policy. Collaboration is especially important in
> responding to the labor market needs, because the credit and noncredit
> sides offer complementary strengths and resources. Responsive colleges
> remove bureaucratic hindrances to collaborate and try to make the credit-

noncredit distinction almost invisible to students and employers.

(MacAllum et al., 2004c, p. 14)

The seamlessness of utilizing both credit and noncredit offerings to meet the needs of the labor market is critical to offering efficient services to students, business and industry (Jacobs, 2014). Yet, even with an understanding of the benefits of integrating, there remains systemic barriers including a lack of integration in data systems between credit and noncredit students (Ewell, 2010). To overcome some of the barriers, 11 states provide funding allocations for non-credit programming to equalize these offerings, however, the remaining institutions must increase entrepreneurial endeavors to secure alternative funding (Noy & Jacobs, 2009). Other strategies to remove the divide between credit and noncredit programming can include utilizing the same faculty to teach in both programs, sharing resources obtained through both funding models for either type of program, and emphasizing the responsibility of business and industry outreach and meeting the workforce education mission belongs to all administration and faculty, no matter the programming they are associated with (ACT, 2012; MacAllum et al., 2004c).

Bridging programming also entails ensuring workforce education and services are not conducted in isolation within the institution (Alfred, 2012; Carnevale, Smith, & Strohl, 2013; Jacobs, 2014; MacAllum et al., 2004c; Noy & Jacobs, 2009). Many argue it is essential for employability skills to be integrated into liberal arts curriculum (ACT, 2012) and remedial education integrated into workforce education (Holzer, 2013; Mellow & Heelan, 2015). The Washington State Integrated Basic Education and Skills Training (IBEST) model is often recognized as an innovative and successful model for this type of integration (Holzer, 2013). 'New Vocationalism' emphasizes the need to integrate

remedial, academic and vocational skills training to better prepare students for the future workforce and career progression (Bragg, 2013; Soares, 2010). Integration is key to innovative and entrepreneurial activities and can occur if the institution develops core teams that include academic, workforce and continuing education leaders (Cejda & Jolley, 2014). Overall, Carnevale et al. (2013) contend that our country will lose social values from traditional education if workforce education is conducted separate from traditional education.

Staff to fulfill workforce mission. It is essential that labor market responsive community colleges employ staff that are business-oriented, entrepreneurial, and open to focusing on business needs and establishing partnerships (MacAllum et al., 2004c). These characteristics are critical since innovation stems from the employees and not the institution (O'Banion et al., 2010). It is argued that workforce and continuing education employees tend to be more innovative than other employees (Weidner, 2010). A responsive community college ensures all staff have the responsibility of promoting the workforce education mission and outreach to business and industry partners (MacAllum et al., 2004c). They also strive to recruit employees that have the right 'fit' to fulfil the institution's needs (Alfred, 2012; Basham & Mathur, 2010). For faculty, this includes guaranteeing they have consistent contact with industry to ensure curriculum is developed in alignment with industry needs (MacAllum et al., 2004c). To ensure staff are able to fulfill their roles in workforce development, labor market responsive institutions invest in professional development and training (American Association of Community Colleges, 2012; MacAllum et al., 2004b). To effectively respond to industry needs also requires faculty buy-in (Goodnow, 2015). Yet, Mellow and Heelan (2015)

note "it can be difficult to change faculty expertise as quickly as industry requires because of structural issues with the academy such as tenure, and/or union rules" (p. 232). Nevertheless, responsive community colleges recruit and support staff that are able to fulfill workforce development roles.

Organizational Culture

The CCLMR Initiative found that community college personnel predominantly embrace traditional academic values and this has created an imbalance in mission focus to give lower priority to workforce education (MacAllum et al., 2004c). A community college's culture determines its results (Connors & Smith, 2011), therefore, campus culture can hinder responsiveness to labor market needs. Yet, culture can be changed through constant communication of the mission and vision (Kouzes & Posner, 2012; MacAllum et al., 2004c; Riggs, 2009), equality within the organizational structure (Bailey & Belfield, 2013; MacAllum et al., 2004c), and collaboration on workforce development efforts (American Association of Community Colleges, 2012; Bly, 2014; Harpine, 2013; Hoffman, 2013). Characteristics of a community college culture that promote labor market responsiveness include: an entrepreneurial culture, a culture reflective of the community it serves, and involvement of business and industry in curriculum development (MacAllum et al., 2004b). Each of these characteristics are addressed below.

Entrepreneurial culture. Even when organizational structures are in place to enhance labor market responsiveness, a culture of responsiveness is also necessary (MacAllum et al., 2004c). Culture is a result of individual mindsets, attitudes and behaviors (Kumar, 2013; MacAllum et al., 2004c). A culture of responsiveness requires

employees to possess and actively display "characteristics like risk-taking, entrepreneurship, innovation, flexibility, and empowerment," (MacAllum et al., 2004c, p. 22) as well as an attraction to collaboration and networking. There must be a shift "from a culture of isolation to a culture of collaboration" (American Association of Community Colleges, 2012). An environment of innovation is highly promoted for community colleges (American Association of Community Colleges, 2005; Kumar, 2013) and an environment of innovation requires an entrepreneurial organizational culture (Hentschke & Caldwell, 2005). Goodnow (2015) states that "higher education institutions must be willing to respond in a 'just-in-time' training fashion to skill up the workforce to meet the needs of today and tomorrow" (p. 53). This requires an institutional culture with entrepreneurial characteristics.

Community colleges are displaying more entrepreneurial traits and current discourse is partially focused on the appropriateness of this evolution as a strategy for acquiring new funding sources and creatively responding to labor market needs (Mars & Metcalf, 2009b). Mars and Metcalf (2009b) define entrepreneurship in the context of higher education "as those activities that combine risk, innovation, and opportunity, particularly in times of uncertain resources" (p. 3) and emphasize that "the application of entrepreneurial frameworks to the complex and multidimensional environments of postsecondary education is common" (p. 1). Yet, some argue entrepreneurial characteristics within a community college and its focus on workforce development are eroding its traditional commitment to serving public needs (Couturier, 2005; Townsend, 2009). Still, the application of an entrepreneurial framework is argued by some to be a viable option for community colleges to respond to labor market demands (Lassiter,

2013; Levin, 2005; Mars & Ginter, 2012; Mars & Metcalf, 2009a) and by others as an unavoidable evolutionary response to the interdependence of community colleges and the economy (Park, 2012).

Campus culture reflects community culture. Labor market responsiveness cannot be achieved if the community college operates in isolation of the community it serves and fails to acclimate to the demographics and culture of that community (MacAllum et al., 2004c). For example, if there is a large influx of non-English speaking populations, the community college must adjust programming focus to ensure English as a Second Language courses are available and accessible to prepare this workforce to meet industry needs (MacAllum et al., 2004c). A systems perspective must be utilized by community college leaders to understand the institutions culture and the needs of the community (Boggs, 2011). Business and industry's perception of the community college culture is one of institutional processes that slow production of results, and at the same time some community college employees resist change that is initiated as a response to business and industry needs (Soares, 2010). There must be institutional commitment to reflect the culture of the community to alter these perceptions.

Involvement of business and industry in curriculum development. Historically, faculty have been deemed the content experts for curriculum development, yet labor market responsive institutions have shifted their culture to heighten the role of business and industry content experts (MacAllum et al., 2004c). All community colleges are required to utilize advisory committees in the development of workforce education curriculum, however it is the degree to which these committees are engaged that increases the college's responsiveness labor market needs (MacAllum et al., 2004c).

31

Industry and business serve a crucial role on advisory committees in reviewing and ensuring workforce education program curriculum meets the needs of the labor market (Bly, 2014). This role has continuously increased along with the growing emphasis on the community colleges role in workforce development (Leigh & Gill, 2007). This engagement of employers and business leaders is deemed a best practice in workforce education program development (Hoffman, 2013). More and more, employers are requesting soft skills training in addition to technical skills, which requires a shift in the college's culture to integrate this content area into programming when they are not familiar with assessing this type of skill development (MacAllum et al., 2004c). And in some cases, they are advocating for content mastery over degree credentials (Jacobs, 2014). Therefore, input from advisory committees is essential in ensuring workforce education programs have credibility as being truly responsive to labor market needs (Nielsen, 1994).

Resources and Funding

The CCLMR Initiative findings confirmed labor market responsiveness of community colleges is impacted by its resources and funding (MacAllum et al., 2004c). The largest challenge facing community colleges ability to provide workforce development is inadequate resources for education and declining state allocations (Katsinas, D'Amico, & Friedel, 2012). It is also important to note, as described by T. H. Bers and Head (2014), that "state legislation, policies, rules, and procedures may have profound impacts on community college budgets and finance, often limiting the freedom and flexibility with which institutions can make decisions perceived to be in their best interests" (p. 105). Since state funding has traditionally been the largest proportion of

community colleges' financial resources, in order to be more responsive they will need to: (a) access alternative funding sources, (b) creatively generate new resources, (c) ensure fundraising responsibilities are shared throughout the institution, (d) ensure resource allocations support workforce and economic development, and (e) develop and maintain facilities that meet the needs of business and industry (MacAllum et al., 2004c). Each of these strategies is discussed below.

Accessing alternative funding sources. The CCLMR Initiative found that "community colleges with higher revenue dollars tend to have more formal programs in place to address specific employer needs, while those with fewer revenue dollars have more programs linked to state initiatives" (MacAllum et al., 2004c, p. 30). This is especially true as a result of the recent economic recession, where state spending has been reduced to higher education (Organization for Economic Cooperation and Development, 2012). Nonetheless, some argue the reductions in state allocations began even before the economic decline (Boggs, 2011; Dowd & Shieh, 2014; Katsinas, D'Amico, & Friedel, 2014). In light of this, it is not feasible for community colleges to continue to rely on this source of funding (The Aspen Institute, 2014). Although some argue policy makers should strive to increase state allocations to community colleges to support their workforce development efforts (Dar, 2013; Mullin, 2011), many contend that community colleges must look beyond the states to acquire resources to diversify funding streams (American Association of Community Colleges, 2012; Lassiter, 2013; MacAllum et al., 2004c; Thornton & Brattebo, 2009).

Standard non-state revenue sources community colleges should be utilizing to diversify their revenue streams come in many forms, including grants, partnerships with

business and industry, in-kind donations, self-support programming, contract training and federal initiatives (MacAllum et al., 2004c). Numerous organizations and government agencies offer grant opportunities to community colleges (Cleary & Van Noy, 2014; MacAllum et al., 2004c) and collaborative partnerships between business and industry, education providers and community-based organizations are usually given higher priority in funding decisions (Bly, 2014; MacAllum et al., 2004c). Responsive colleges also proactively monitor and apply for both state and federal funding initiatives (MacAllum et al., 2004c). The Obama Administration has and intends to release grant funding options directly focused on connecting community colleges with business and developing innovative workforce programming (The White House, 2009). In addition to other state and national sources of revenue, local options may be just as important. When researching whether community colleges were labor market responsive, Leigh and Gill (2009) found that "higher levels of local funding are positively associated with responsiveness, but the connection is a loose one" (p. 101). Partnering with business and industry to meet their specific needs can provide community colleges with financial, material and facility resources directly from the business or industry organization (MacAllum et al., 2004c). College foundations are also a source of revenue generation from donors (Drummer & Marshburn, 2014; MacAllum et al., 2004c), however in most cases this is not a significant source of revenue for community colleges to rely on (Dowd & Shieh, 2014). Even larger foundations and private donors are giving focus to funding economic and workforce development initiatives (Cleary & Van Noy, 2014). Community colleges can also use self-support programming and contract training to provide training services to business and industry without reliance on state funding

allocations (MacAllum et al., 2004c). Overall, these historically standard means of

generating non-state revenue provide community colleges many options to increase their

revenue generation and responsiveness.

Creativity in generating new resources. The most responsive community

colleges do not rely solely on state allocations or other historically standard means of

generating revenue (MacAllum et al., 2004c). They also look to entrepreneurial skills

and models to creatively acquire funds and resources necessary to be responsive

(American Association of Community Colleges, 2005; Dowd & Shieh, 2014; Hentschke

& Caldwell, 2005; MacAllum et al., 2004c; Mars & Metcalf, 2009b; Woodland &

Parsons, 2013). This can directly tie faculty and administration's work to profit-driven

endeavors, which is one aspect of academic capitalism (Szelenyi & Goldberg, 2011). To

offset the negative perception of leadership that entrepreneurial efforts may create, Dowd

and Shieh (2014) contribute the descriptive term 'resource-maximizing' as opposed to the

business model term of 'profit-maximizing.' Hentschke and Caldwell (2005) partially

attribute the need for entrepreneurial leadership in community colleges to increased for-

profit higher education and its creation of competition. Yet some believe it is essential

for community college leaders to become aggressive in their promotion of entrepreneurial

endeavors and partnerships to increase resources (Boggs, 2011; Woodland & Parsons,

2013). Alfred (2012) provides a conceptualization of this culture of creativity and

entrepreneurialism:

> For institutions and leaders this will mean innovation – finding new and
>
> better ways of delivering services, creating efficiencies and cost
>
> economies, and improving outcomes. It will also mean doing things that

were heretofore considered unpalatable: changing the business model,

procuring significant private sources of funding, redesigning

organizational structure, collaborating with competitors, reengineering

culture, streamlining systems and processes, and learning how to change

through substitution. (p. 112)

As this conceptualization reflects, creatively generating new resources requires

structural and cultural changes. It requires leaders to aggressively reduce resource use

while promoting resource generation (Lassiter, 2013). The more entrepreneurial

community colleges promote and support creativity throughout the institution (Hentschke

& Caldwell, 2005).

There are many examples of community college creativity in generating new

resources that could be modeled by others. Some community colleges' entrepreneurial

approaches include offering the subject matter expertise of both their staff and faculty on

a fee-for-service basis as a consulting service (MacAllum et al., 2004c). Other colleges

have even created separate non-profit entities to separate their entrepreneurial activities

from the institutions standard regulations and funding requirements (MacAllum et al.,

2004c). In other cases, the community college owns businesses to provide training

programs within and generates revenue from student operated management and service

delivery (MacAllum et al., 2004c). There is also the practice of up-scaling program

offerings by utilizing technology to offset resource limitations (Mourshed et al., 2012). If

maintaining credit programming was not necessary due to state funding requirements,

many community college leaders would transition programming to noncredit in order to

increase flexibility and responsiveness (MacAllum et al., 2004c).

Responsive community colleges do not turn entirely away from government support, but seek support for new revenue streams (MacAllum et al., 2004c). And some have sought support from county government and attained annual funding allocations (MacAllum et al., 2004c). In many cases, funding opportunities from government agencies already exist, but they must be awarded through granting processes. Yet, even though community colleges should have grant writing staff, many do not (Lorenzo, 2013). It is essential that revenue generation is supported by an institutional and leadership commitment to creating and maintaining a development and grants department to lead efforts (Drummer & Marshburn, 2014).

Fundraising responsibilities of staff. In the current economic environment it is more important than ever for community colleges to commit to fundraising activities (Drummer & Marshburn, 2014). There is great disparity in the means of fundraising employed by community colleges across the nation, yet it is an essential activity that community colleges must dedicate human resources to (MacAllum et al., 2004c). In most cases, the role of the president is crucial in securing non-traditional funds (Drummer & Marshburn, 2014; MacAllum et al., 2004c). However, Boggs (2011) stated that "fundraising and financial management are two skills for which presidents report a lack of preparation" (p. 14). In other cases, the college foundation is the primary actor maintaining relationships with business and industry and securing new funds (MacAllum et al., 2004c). Yet, in many cases the college foundation is not able to effectively fulfil this role with limited human resources (Drummer & Marshburn, 2014). Proposals require information, time and input from an entire team of staff in multiple departments, including content areas for programming, financial staff, and institutional research staff,

among others (Drummer & Marshburn, 2014). Overall, it is important that there is a shared responsibility among staff for resource allocation (Woodland & Parsons, 2013).

Resource allocation to support workforce and economic development. A review of a community college's resource allocations is a good indicator of its leadership's commitments (MacAllum et al., 2004c). Resources should be allocated to support all workforce development efforts, including maintaining partnerships, securing resources, developing and updating curriculum (MacAllum et al., 2004c). Resources are continuously needed to ensure programs and trainings are in alignment with the skills employers and industry are seeking (ACT, 2012). This also requires timely program reviews to ensure unbeneficial programs are retired and replaced with high demand occupational training (ACT, 2012). In addition, much needed career advising services are non-existent or not adequately funded to support students at community colleges (Organization for Economic Cooperation and Development, 2012). Financial, human and material resources need to be adequately allocated to support the community college's mission toward workforce development (MacAllum et al., 2004c).

Facilities that meet business needs. One area of resource allocation that can increase a community college's ability to be labor market responsive is facilities that meet industry training needs (MacAllum et al., 2004c). Thornton and Brattebo (2009) believe that for community colleges to provide adequate training services to businesses, they must "provide them with locations comparable to their workplaces. [Therefore], the creation of new campus sites that delivered corporate training and professional development...would enhance ...campus-based work force training greatly" (p. 11). In general, community colleges struggle to maintain outdated facilities or secure funds to

build new facilities that meet workforce education training needs (The White House, 2009, July 14). Ultimately, the high expense of expanding existing facilities and acquiring new facilities is a deterrent for community colleges (Mourshed et al., 2012). Yet, some community colleges are innovatively utilizing spaces or developing new spaces to better conduct workforce development efforts (MacAllum et al., 2004c). For example, Rhodes (2015) describes a transformation of a mall into a workforce education hub by Austin Community College:

> Imagine a state-of-the-art facility, stretching 1.2 million square feet, where Austin Community College brings innovative instruction, flexible training labs, business incubator space, public-private partnerships, and non-profit resources under one roof - all to benefit students and the communities the college serves…The campus includes state-of-the-art classrooms, computer labs, study areas, library and media center, student commons, and ACCelerator - the nation's largest learning lab, providing more than 600 computer workstations for individualized instruction through technology. (p. 42)

Overall, a lack of resources for effective facilities impacts both the community college's capacity to serve students (Katsinas et al., 2014) and meet the needs of business and industry.

Information and Data

The CCLMR Initiative emphasized the critical need for community colleges to utilize information and data analysis to strengthen accurate responses to labor market needs (MacAllum et al., 2004c). This includes (a) understanding the local and regional

economy, (b) gathering information from personal contacts, (c) implementing program reviews, and (d) implementing data-driven strategic planning (MacAllum et al., 2004c). Each of these factors of information and data analysis are addressed below.

Understanding the local and regional economy. One of the American Association of Community College's recommendations for closing the American skills gap is for community colleges to understand labor market trends (American Association of Community Colleges, 2014). Many agree it is the college's role to understand their region's industry needs (González, 2012; Kress, 2012; Lebesch, 2012) and provide programming that meets these needs (Imperatore, 2014). In order to attain adequate information about local and regional workforce needs, successfully responsive community colleges utilize economic data databases and analysis services, collaborate with their local economic development partners to attain data, conduct their own data acquisition through surveys and focus groups (MacAllum et al., 2004c). Cleary and Van Noy (2014) recognize that labor market information can be successfully and effectively collected with regional or state-wide employer surveys through economic development partner collaborations. Yet, to increase access to accurate data, the American Association of Community Colleges (2012) recommends the strategy of developing "technology-based tools that will help local colleges access available labor market data to identify and monitor skills gaps in their region" (p. 27). However, opportunities to access information is just one step to understanding the local and regional economy.

Although, there are many opportunities for community colleges to collect information and data about their local and regional labor markets, literary discourse highlights many challenges for community colleges to utilize this information and data to

40

meet workforce needs. There is much concern that there is a lack of up-to-date data

available to community colleges (Altstadt, 2011; Cleary & Van Noy, 2014). In addition,

in some cases the information they have access to is not detailed enough or inadequate to

make a programming decisions (The Aspen Institute, 2014). Some suggest using online

job announcements as an alternative source of real-time data, although this is not an

absolute representation of job openings (Altstadt, 2011). There is also concern about the

reliability and validity of real-time data (Cleary & Van Noy, 2014). Although there are

numerous sources of workforce and economic data for community colleges to utilize,

Cleary and Van Noy (2014) claim "there are no current standards that indicate which data

indicators and sources provide the most reliable and valid information for colleges on job

vacancy and skill demand" (p. 11).

There is also concern that community colleges lack the human and financial

resources to access data or adequately conduct data analysis (Altstadt, 2011). It is,

therefore, uncertain how or if colleges are actually able to effectively respond to labor

market needs (Imperatore, 2014). Local trends change more quickly that national trends

and community colleges may struggle to be responsive (Kasper, 2009). A community

college can inappropriately produce too much skilled labor in a specific industry if they

do not pay attention to local trends (Kasper, 2009).

Another focus of the discourse concerns how information and data will be used to

guide workforce development strategies. One method of understanding the local and

regional economy is to focus on sector-based strategies. Under the Gregoire

administration, Washington State began to give emphasis to a cluster-based approach to

sector strategies, which was already being utilized in local efforts within areas of the state

(Washington Workforce Training and Education Coordinating Board, 2008). The

Washington Workforce Training and Education Coordinating Board (2008) describes this

approach in relation to a traditional sector strategy approach:

> A cluster is not the same this as an industry sector. A sector is a group of
>
> firms with similar business processes, products or services, for example
>
> construction or health services. At the core of a cluster is a particular
>
> industry sector, but a cluster is not restricted to firms within the sector
>
> since it includes related institutions and firms in other industries. (p. 2)

Carnevale et al. (2010) argues that workforce education pathways should be

aligned with occupations instead of industries, which is in alignment with most economic

development strategies. However, the Workforce Innovation and Opportunity Act

(WIOA) of 2014 emphasizes the need to impact workforce development through sector-

based strategy and as a WIOA partner community colleges must be engaged in this effort.

Utilizing personal contacts to gather information. Information gathered from

personal contacts about local labor market needs is essential for increasing successful

responsiveness of community colleges (MacAllum et al., 2004c; The Aspen Institute,

2014). While data sources are important, information gathered directly from the

college's partners is the most critical (Imperatore, 2014). MacAllum et al. (2004c)

identify the president and upper management as playing the key role in gathering "insider

information" from personal contacts and describe the critical impact this has for the

college:

> Insider information is likely to be available in advance, before published
>
> sources, and even more up-to-date than industry reports. It is likely to be

richer, more specific, and more localized – more informative with respect

to a particular company or industry or location. Having such information

enables a college to sharpen its responsiveness, to step up quickly to

address new trends and developments. (p. 41)

The colleges' board of trustees is also a resource for acquiring insider

information. Brown (2015) believes the board of trustees should have community

connections, especially business and industry, that they inquire with regularly and should

"know the needs of business in the community" (p. 13). Ultimately, it is essential to have

various college representatives connected to business and industry to gather first-hand

information.

Insider information can be gathered from industry specific advisory groups that

are utilized by community colleges in program development (MacAllum et al., 2004c).

Altstadt (2011) contends that "these groups can provide valuable insight about workforce

needs, but they don't necessarily reflect broader trends within the local labor market;

even the best advisory boards represent just a fraction of the total employers in a region

or industry" (p. 3). Advisory groups can also be problematic to organize and maintain

active engagement in (Altstadt, 2011). One method of utilizing an advisory group that

provides specific details on labor market demands are Developing a Curriculum

(DACUM) events, yet many other forms of one-time collection of information from

advisory groups does not effectively generate adequate details (Cleary & Van Noy,

2014). Overall, direct communication with employers and industry partners allows a

college to identify dying and emerging trends prior to economic data reports (The Aspen

Institute, 2014).

Program review. Program review is a standard process for most community colleges, however market responsive colleges demonstrate a broader consideration than merely the cost effectiveness or student enrollment of the program (MacAllum et al., 2004c). Program reviews are essential for determining institutional effectiveness and should highlight a department, division or area's role within the institution as well as its service to the community (T. Bers, 2011). Regular evaluation is also necessary for maintaining quality educational programs (Boggs, 2011). It is essential that workforce education and training are directly connected to the labor market (Carnevale et al., 2013; Dar, 2013). However, incorporating labor market analysis findings into programs is a challenging task involving several areas of implementation, including program selection and enrollment management, program content and curriculum, instructional strategies and students services (Cleary & Van Noy, 2014).

A key factor of program review is analysis of supply and demand. ACT (2012) emphasizes the role community colleges have to eliminate programming that is not in alignment with labor market needs to ensure students are not given the option of paths that do not lead to family-wage, in-demand occupations. MacAllum et al. (2004c) found that a "hallmark of market-responsive colleges is their refusal to cut course offerings automatically when faced with low student interest. Instead, they proactively cultivate student interest in programs that have low enrollments, but high demand from local employers" (pp. 42-43). An analysis of supply (credential attainment) and demand (labor market data) is essential for adjusting the supply, matching the programs of study to workforce demand, and matching levels of education to workforce demands (The Aspen Institute, 2014).

An additional method of program review is measuring student employment outcomes related to programs of study. Many market-responsive colleges are utilizing employment agency data to match employment and wage data to their enrollment data (Ewell, 2010; MacAllum et al., 2004c). Access to this external data is possible through economic development system partnerships (Ewell, 2010). Collecting employment and wage data on students has been a long standing practice, however, colleges need increased accessibility and better information to more accurately complete program reviews (The Aspen Institute, 2014). Some colleges are relying on student exit surveys to collect this data, however the response rate tends to be less than adequate (MacAllum et al., 2004c). Yet, data matching between student completion data and employment wages is a wise strategy for community colleges (Carnevale et al., 2013) and there is much support for the continued use of student employment outcomes data (ACT, 2012).

Information and data-driven strategic planning. There is much discussion within the literature about the need for community colleges to establish a culture of evidence, otherwise referred to as data-driven decision making (American Association of Community Colleges, 2012; Imperatore, 2014; Lebesch, 2012; Manning, 2011; Morest, 2009; Prince, 2012; The Aspen Institute, 2014). The American Association of Community Colleges (2012) describes this needed shift as one "from a culture of anecdote to a culture of evidence…from information infrastructure as management support to information infrastructure as learning analytics" (pp. ix-x). Utilizing information and data at an institutional level can impact a cultural shift that can positively lead to a change in the college's mission in better positioning with the communities it serves (MacAllum et al., 2004c). The American Association of Community Colleges

45

(2005) recommends community colleges use both internal and external data for successful data-driven strategic planning. This includes the use of environmental scanning to keep up with changes impacting the college (Hines, 2011). MacAllum et al. (2004c) note that a wider institutional analysis of "internal structures and resource allocation as well as the external political and policy context" (p. 45) can assist decision makers in realigning resources, processes and goals to the mission of workforce development. Foundationally, a culture of evidence includes the wide-spread dissemination of information and inclusion of all stakeholders in the decision-making process (Woodland & Parsons, 2013).

There is also an accountability movement within community college systems across the nation that attaches funding to demonstrated outcomes (Morest, 2009). Similarly, accrediting agencies require community colleges to have departments dedicated to institutional effectiveness to ensure data-driven decision making is prioritized (Manning, 2011). Prince (2012) states that community colleges collect "massive amounts of data" (p. 11). Nonetheless, for many institutions they do not have the resources to adequately use data for strategic planning and Institutional Research (IR) departments may predominantly be collecting data for compliance reporting (Morest, 2009). The National Governors Association (2013) argues that "gathering and analyzing more and better data will be critical in determining where changes need to be implemented" (p. 2) in order to meet the labor market needs of the future. However, gathering data is not enough, community colleges must create a culture of data analysis for decision-making and not just compliance reporting (Morest, 2009; Prince, 2012).

Strategic planning for community colleges, however, should not merely be focused on expansion. In order to ensure their viability and efficacy, community college leaders need to establish measures of success aside from growth indicators (Alfred, 2012). Similarly, Boggs (2011) stresses the need for inclusion of "metrics related to workforce, economic, and community development" (p. 12) to measure the effectiveness of a community college. Wilson (2014) concurs that in light of "limited resource, simply expanding all forms of education and training is not an option [and] investments need to be targeted to the gaps" (p. 10). Therefore, strategic planning in alignment with the mission of workforce development must take into consideration external outcomes and quality over quantity.

In addition to ensuring the correct focus for strategic planning, community college leaders also need access to relevant information and data. Boggs (2011) notes the challenges community college leaders have in accessing accurate information and the impact a lack of information has on portraying institutional effectiveness and resource needs to policy makers and other decision makers. The lack of access to accurate labor market data is noted by many to be a hindrance to community colleges' ability to be responsive (Bradley, 2011; González, 2012; The Aspen Institute, 2014). The Aspen Institute (2014) notes that most states are just beginning to focus on developing data management and delivery systems to support community colleges' need for accurate labor market information. González (2012) also notes that relying on outdated labor-market data is risky decision-making practices for community colleges. Lebesch (2012) summarizes the current data-driven decision making challenge community colleges face:

Availability and currency of labor market data for the college's service

area can be a major challenge. Data produced in aggregate and for a

larger geographic area than the institution serves are of limited utility for

decision making. Add to this the fact that data often lags in time and

cannot account for rapid and unpredictable changes in the economy and

local labor market. (p. 10)

Imperatore (2014) also emphasizes the difference between the "more traditional

labor market data and projections that are based on decades of measurement by

government agencies…[and] data that is captured and analyzed in 'real time'" (p. 27).

The lack of access to real-tie data is a hindrance to community colleges' responsiveness.

Currently, most community colleges have access to several data sources, though not real-

time data. These include government agency, private data-analysis company, and

community college initiated data sources and examples are presented in Table 1.

However, overall, there is a lack of use of available data in decision making (Ewell,

2010), and there is little know about how community colleges are actually using data to

develop or revise programs (Cleary & Van Noy, 2014).

Table 1

Data Sources for Community Colleges

Government Sources	Private Sources	Community College Initiated
▪ Unemployment Insurance data	▪ Burning Glass	▪ Focus groups
▪ U.S. Department of Labor	▪ EMSI	▪ Observations
▪ Bureau of Labor Statistics	▪ Career Builder	
▪ Occupational Outlook Handbook		
▪ U.S. Census Bureau		
▪ State Data Sources		
▪ County Data Sources		

Note. Adapted from "Using Labor Market Data to Improve Student Success," by The Aspen Institute, 2014. Copyright by The Aspin Institute, College Excellence Program.

Relationship Building

   The CCLMR Initiative reported that community colleges must be committed to ongoing relationship building and maintenance in order to have an accurate understanding of labor market needs and opportunities (MacAllum et al., 2004c). Existing relationships are the foundation for future strategic partnerships, resource generation and marketing efforts (MacAllum et al., 2004c). To increase labor market responsiveness, community colleges should give attention to: building and participating in local networks, ensuring relationship building and messaging are the responsibility of all staff, and ensuring the workforce development mission is integrated into marketing messages and efforts (MacAllum et al., 2004c). These factors of relationship building are addressed below.

   Building and participating in local networks. Responsive community colleges need to be engaged in an extensive network of relationships with business and industry, economic development partners, government and other education service providers (Leigh & Gill, 2009; MacAllum et al., 2004b). This is not an easy objective to maintain due to the number and level of continuous engagements necessary (Mellow & Heelan, 2015). Yet, responsive community colleges understand relationship building is a complex, though necessary, process and dedicate sufficient financial and human resources to the endeavor (MacAllum et al., 2004c). Figure 2 demonstrates the expansive and continuous nature of these relationships. Amongst workforce and economic development partners, "there is still some frustration that community colleges are not always at the table" (Nickoli, 2013).
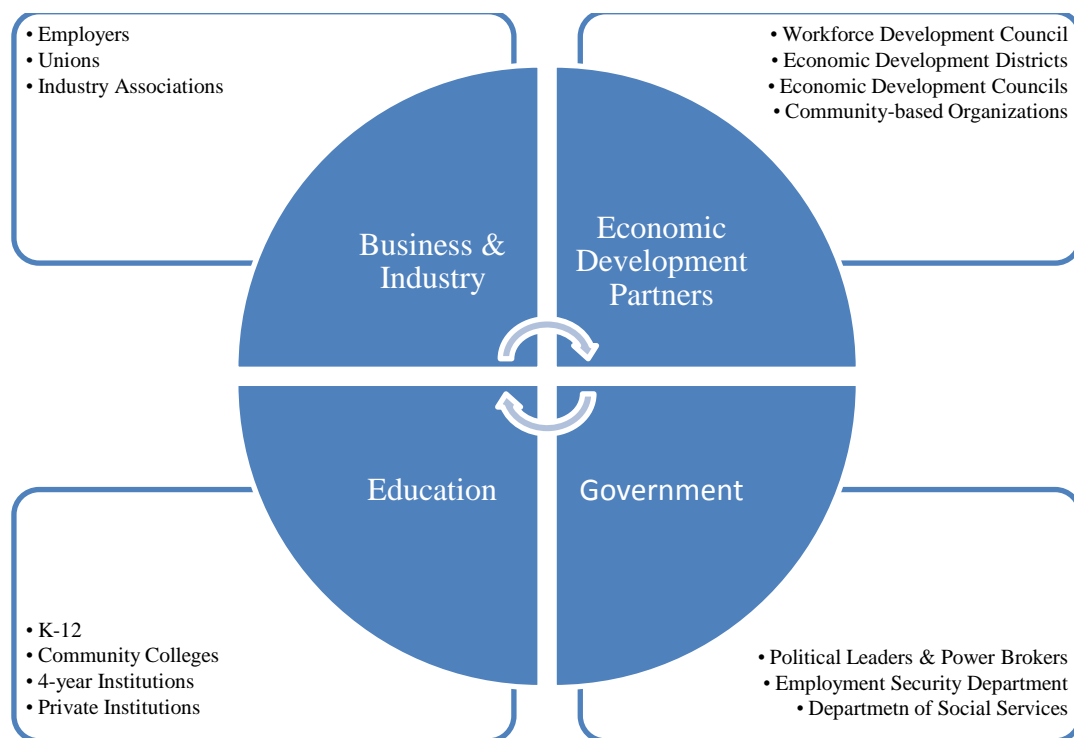
Figure 2. Core areas of relationship building community colleges should focus on to increase their labor market responsiveness and examples of the types of constituencies that should be included.

Although all community colleges form relationships with constituencies within their communities to some degree, it is the level of engagement, amount of relationships, and variety of relationships that set labor market responsive institutions apart (MacAllum et al., 2004c). Informal relationships are more common than formal partnerships for community colleges and they come in many forms (Amey, 2010). Responsive colleges also seek out regional and state level relationships in addition to local connections (MacAllum et al., 2004c). However, it is also important for community colleges to not overlook the benefits of maintaining close relationships with other education service providers (MacAllum et al., 2004c).

There are many benefits to maintaining external relationships, including marketing, resource acquisition, and partnerships (Boggs, 2011; MacAllum et al., 2004c).

Promotion of the college's workforce development mission and vision is enhanced

through relationships (American Association of Community Colleges, 2005; Boggs,

2011). Simply being present in local and regional economic development groups, and

with local businesses, allows the community college to hear first-hand opportunities for

partnering (Kress, 2012), and forecasts about future programming possibilities (Nickoli,

2013). The importance of developing relationships around industry clusters has also

gained attention (Kress, 2012; Washington Workforce Training and Education

Coordinating Board, 2008). In addition to information gathering, resource acquisition is

predominantly based on relationships (MacAllum et al., 2004c), especially grant funding

which is often dependent on preexisting relationships (Bly, 2014). It is also a great

benefit to utilize relationships to disperse promotional materials through partners

distribution channels (MacAllum et al., 2004c). Yet, most importantly, relationships with

business and industry provide strengthened career pathways for students through

collaborative development of curriculum, shared resources and student employment

opportunities (Cleary & Van Noy, 2014; Jacobs, 2014).

Relationship building and messaging responsibilities. It is practical for the

president and workforce administrators to lead workforce education messaging and

relationship building efforts (MacAllum et al., 2004b). Yet, all college staff must

communicate the same message about the college's dedication to workforce development

(Jacobs, 2014; MacAllum et al., 2004c; Organization for Economic Cooperation and

Development, 2012). This includes the responsibility of the board of trustees to share the

college message with the community (Brown, 2015; MacAllum et al., 2004c). In most

community colleges, there is a division dedicated to workforce education and it is also

the responsibility of these divisions' administrators to build relationships and share the

message, more so than others (MacAllum et al., 2004c). MacAllum et al. (2004c)

acknowledge the disbursement of responsibilities in a responsive community college:

    [M]any community colleges sustain an economic or workforce

    development mission based almost entirely on the work of the president

    and the division dedicated to that mission…[yet at responsive colleges] the

    mission of labor market responsiveness has so permeated the organization

    that everyone on staff feels responsible for making it happen. (p. 52)

    It is important that the responsibility for relationship building is shared throughout

the institution, rather than solely in the hands of the president or high-level management

(Amey, 2010; Kouzes & Posner, 2012; MacAllum et al., 2004c). Amey (2010) also

emphasizes the reasoning for sharing the responsibility of relationship building:

    [M]any creative partnerships are established by those in lower levels of

    the institution because employees have more direct knowledge of unit

    potential when in proximity to the work and may also be more familiar

    with areas that will require support if the partnership is to be successful.

    (p. 18)

    Therefore, it is critical for all staff to be empowered and dedicated to creating and

maintaining relationships. However, an entrepreneurial leadership can increase the

successful creation and maintenance of productive relationships (American Association

of Community Colleges, 2012).

    It is also critical that community college staff give focus to listening to the needs

of community and business, in addition to sharing their own message, and proceed with

every interaction as a two-way communication (MacAllum et al., 2004c). The

Organization for Economic Cooperation and Development (2012) recommends that

"potential employers should be given more opportunities to provide input regarding their

specific needs for skills and training, so that degree programmes and even individual

courses can be tailored appropriately to the labour market" (p. 72). However, listening to

external constituents' needs must also be followed with revisions to current curricula to

constantly attain better alignment (Goodnow, 2015). Listening also builds trust with

external partners and is the key to relationship building (Amey, 2010). Ultimately, the

encouragement by leadership to maintain open communication with external partners will

increase the opportunities for new innovations by promoting idea sharing (Kouzes &

Posner, 2012).

    Marketing message includes workforce education mission. In order to increase

more productive relationships, the college's mission must truly portray a commitment to

labor market responsiveness (MacAllum et al., 2004c). Nickoli (2013) emphasizes the

perception that must be established by stating that "community colleges must be

proactive in presenting themselves as partners in economic development" (p. 77). This

message of the college's dedication to workforce development must be formalized in

writing, positioned in publications, and openly vocalized (MacAllum et al., 2004c). It

must also be tailored appropriately to different audiences (Boggs, 2011). The message

must emphasize the community college's ability to be proactive, responsive and flexible

in delivering services that meet the community's needs (MacAllum et al., 2004c). Yet,

this message can be undermined if the college does not demonstrate a history of being

labor market responsive. The college's credibility matters for ongoing relationships

(Nielsen, 1994). Therefore, evidence of the college's excellence in being responsive

should also be promoted (MacAllum et al., 2004c).

Partnerships

The CCLMR Initiative concluded that partnerships with local business, industry

and economic development partners are unavoidable if community colleges are to be

labor market responsive (MacAllum et al., 2004c). Yet, only 13% of business leaders

recognize higher education as collaborative partners (Gallup, 2014) and many perceive

them to move too slow (Wright, 2015). To be more labor market responsive, community

colleges must (a) develop and maintain partnerships, (b) set strategic priorities for

partnerships, (c) support the education and workforce pipeline, and (d) attract and

develop entrepreneurial and customer service-oriented staff. Each of these criteria for

partnerships is presented below.

Developing and maintaining partnerships. The development and maintenance

of partnerships is a complex and labor-intensive endeavor for community college leaders

(Amey, Eddy, & Campbell, 2010; Eddy, 2010). Yet, partnerships with business increase

student support in career pathways, provide opportunities for professional development

for faculty, allow for resource sharing and better align strategic planning efforts of the

community college to the needs of the labor market (Soares, 2010). A community

college and business partnership is defined and described by Soares (2010) as:

> a collaboration between a community college and an individual business,
>
> group of firms, chamber of commerce, industry association or sector
>
> partnership with the purpose of using the resources of all partners to create
>
> alternative college education programs for non-traditional students (both

younger workforce entrants and older ones in need of skills and education

upgrades) that are tightly linked to regional economic development and

labor force needs. Partners can contribute human resources, finances,

facilities and equipment and leadership to accomplishing the partnerships

agreed upon goals and outcomes. (pp. 8-9)

Partnerships are necessary to stretch limited resources of the community college

(Amey et al., 2010; Boggs, 2011; Brand, 2014). Yet, leaders must also be prepared to

commit adequate resources, establish guidelines and provide oversite for strong

partnerships (Eddy, 2010).

Community colleges must also demonstrate they are innovative, flexible and

responsive to their partners' and the community's needs (MacAllum et al., 2004c). Yet,

Harpine (2013) recognizes the historical skepticism concerning each other's intentions

and a reluctance to fully partner between industry and education, and recommends

community colleges embrace more entrepreneurial approaches to increase partner

acceptance and commitment. A perception of mutual benefit must exist between all

partners for the partnership to be successful and the end goal must be to leverage

resources, not individual gains (MacAllum et al., 2004c). It is highly necessary for these

partnerships to succeed. According to Harpine (2013) "business and education must

form alliances working together to create a new workforce identity in this competitive

global economy" (p. 9). Some argue that legislative policies are needed to force a more

integrated partnership between industry and education (Holzer, 2013; Organization for

Economic Cooperation and Development, 2012). In an effort to strengthen partnerships,

the newly enacted Workforce Innovation Opportunity Act of 2014 emphasizes the role of

education and training in the nation's workforce development systems and mandates states to implement more formal partnerships between industry and education (Workforce Training and Education Coordinating Board, 2014). Unavoidably, it is critical for community colleges to partner with industry to meet labor market needs (American Association of Community Colleges, 2014; Dar, 2013; Goodnow, 2015; Imperatore, 2014; Mourshed et al., 2012; National Governors Association, 2013; Soares, 2010).

Setting strategic priorities for partnerships. Colleges need to strategically plan their partnerships in alignment with their mission and resource acquisition plans (Amey, 2010; Eddy, 2010; Hentschke & Caldwell, 2005; MacAllum et al., 2004c; Nielsen, 1994; Woodland & Parsons, 2013). Woodland and Parsons (2013) prescribe that "understanding the source and locus of change is a critical first step in determining which strategies will be most effective for advancing partnerships with appropriate institutional support" (p. 29). Strategic priorities need to be a direct result of analyzing the local labor market trends and internal institutional strengths and weaknesses (MacAllum et al., 2004c). Partnerships are essential for addressing the current labor market skills gap and the ACT (2012) describes the strategic priorities that should be considered:

> The focus should be on understanding the local economy and current labor market needs, and most importantly, identifying emerging workplace skills requirements. These partnerships should also assess the balance of leadership commitment, financial and human resources, and organizational policies and practices for the purpose of closing skills gaps in light of local workplace needs. As community colleges strive to fulfill a multifaceted mission, they must provide an array of educational services

56

to each community while also having a laser-like focus on meeting the specific skill development needs of the local workforce. (p. 10)

Community colleges receiving the most resources, growth and recognition from partnerships have leaders that strive to connect with large businesses, innovative industries and even national and international employers (MacAllum et al., 2004c). However, Brand (2014) does not believe international partnership are appropriate for community colleges. Yet, extensive partnerships with business permit the community college to be responsive (Thornton & Brattebo, 2009).

The education and workforce pipeline. Partnerships must also include primary, secondary, and other post-secondary education institutions in order to establish career pathways to meet industry needs (Amey et al., 2010; Eddy, 2010; Hoffman, 2013; MacAllum et al., 2004c; Richburg-Hayes et al., 2013). The Business-Higher Education Forum (2010) reported "the challenges of meeting workforce demands…are exacerbated by the poor alignment among P-12 education, postsecondary education, and the workforce" (p. 4). Community colleges are the bridge between secondary and four-year institutions and partnerships can strengthen this pipeline for developing the future workforce (MacAllum et al., 2004c). Articulation agreements are common forms of partnering between educational institutions (Amey et al., 2010; MacAllum et al., 2004c; The White House, 2009, July 14). However, successful labor market responsive institutions find more specific and innovative ways of partnering, including co-location (MacAllum et al., 2004c). Dual enrollment in high school and college courses is also a proven approach to partnering (Amey et al., 2010; Barnet & Hughes, 2010; MacAllum et al., 2004c; The White House, 2009, July 14). Other partner activities include targeted

marketing and outreach to increase student interest (Barnet & Hughes, 2010), which

especially benefit community college enrollment when targeted to specific high demand

fields (MacAllum et al., 2004c). This heightened focus on workforce development and

career pathways between education institutions is referred to as 'new vocationalism,' and

some find uncertainty in the benefits to students (Bragg, 2013).

In many cases the education and workforce pipeline is referred to as career

pathways. A career pathways model engages all workforce development partners to

establish education pathways directly in alignment with labor market needs and

communicates this alignment to students to assist in their successful navigation to

employment (ACT, 2012). Career pathways that are comprehensively built and clearly

communicated are recognized as a best practice (Hoffman, 2013; Richburg-Hayes et al.,

2013). The White House (2009, July 14) acknowledges the positive impact of career

pathways, and the American Association of Community Colleges (2012) recommends

that community colleges develop and utilize comprehensive career pathways as a proven

approach to providing workers with needed skills. Alternatively, McKernan (2015)

advocates for 'talent pipeline management' where employers take the lead in establishing

and guiding relationships with education and government to develop the skilled

workforce they need. Yet, although Kanter (2015) prescribes bold proactive efforts by

community colleges to strengthen partnerships, she emphasizes the shared responsibility

the education and workforce pipeline is between business, government and education.

No matter who takes the lead, career pathways should include stackable credentials

aligned with industry skill needs (American Association of Community Colleges, 2012),

and allow for multiple entry and exit points (Richburg-Hayes et al., 2013). This is only achievable through partnerships with other education providers and business.

Entrepreneurial and customer service-oriented staff. Community college and industry partnerships lead to innovation (Weidner, 2010). However, it is the entrepreneurial and customer service attributes of the colleges employees that are supported by leadership that enhance development and maintenance of partnerships (Amey, 2010; Eddy, 2010; MacAllum et al., 2004c). Partnerships are most successful if they are managed by those at the front line with support from and constant communication with senior leadership to ensure resource needs are met to support the partnership (Amey, 2010). Day-to-day interactions with partners is most productive in strengthening the partnership when the staff member is customer oriented and innovative (MacAllum et al., 2004c). It is also critical for college employees to show a determination for continuous improvement to their partners, as this demonstrates the college's ability to be responsive (MacAllum et al., 2004c). These staff characteristics must be sought after and supported by community college leaders (MacAllum et al., 2004c). Leaders must consistently communicate the importance of each partnership to all staff and motivate them to maintain it (Amey, 2010). Some labor market responsive community college leaders have even implemented incentives for employee entrepreneurialism and customer service, including stipends, training opportunities and awards (MacAllum et al., 2004c).

Cejda and Jolley (2014) highlight a 'third wave' model for community colleges that emphasizes partners as a means to impact economic development and not merely for short-term benefits to the institution. This model is entrepreneurial and strives to sustain

partnerships as long-term relationships. In the current community college environment, leaders have the opportunity to impact student outcomes through entrepreneurial approaches (Dorsey, 2012). The National Governors Association (2013) contends that it will take innovative efforts between education, business and government working in partnership to meet the labor market needs of today and tomorrow.

Conclusions

Chapter II has provided a review of the literature associated with the labor market responsiveness of community colleges. Although there is much debate concerning whether community colleges are prepared to be responsive to the labor market, there is no consensus. The literature does however identify several key characteristics necessary for community colleges to be responsive to the labor market. Most importantly, the CCLMR Initiative, along with recent discourse related to internal characteristics of responsiveness, has provided a foundational model for measuring the internal dimensions of labor market responsiveness of community colleges.

CHAPTER III: METHODOLOGY

Overview

Chapter III presents the methodology of this study. The purpose statement and research questions are provided as the foundation for the research design. The research design, its alignment with the purpose of the study and its theoretical basis are described in detail. The study's population and sample are also identified. The instrumentation, data collection and data analysis processes and reasoning for selection are discussed and, in conclusion, limitations are addressed.

Purpose Statement

The purpose of this mixed methods study is to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive as measured by the seven dimensions of the CCLMR assessment (leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building, and partnerships). A secondary purpose of this study is to explore the factors that hinder or enhance the seven dimensions of a community college's labor market responsiveness.

Research Questions

1. To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's seven dimensions of labor market responsiveness?

a) leadership and governance

b) organizational structure and staffing

c) organizational culture

d) resources and funding

e) information and data

f) relationship-building

g) partnerships

2. What factors hinder or enhance the seven dimensions of a community college's labor market responsiveness as perceived by workforce education administrators?

Research Design

This study employed a mixed methods design that collected quantitative data to describe the system, followed by a collection of qualitative data to further explain the descriptive data. This is a type of explanatory design in which initial quantitative findings are further explored through qualitative data gathering (McMillan & Schumacher, 2010). Implementing both quantitative and qualitative approaches within the research design provides a more holistic representation of the variables being studied (McMillan & Schumacher, 2010; Roberts, 2010). This explanatory design was implemented using a questionnaire, presented in Appendix B, with both fixed-choice and open-ended questions, which is a standard technique for employing both methods (Michael Patton, 2002).

The quantitative methods employed followed a non-experimental research design. Descriptive data was gathered to identify the degree to which community colleges in

Washington are labor market responsive and to identify commonalities or variations between each of the seven dimensions of responsiveness measured. When aggregated, this descriptive data provides a generalization of the current state of labor market responsiveness of the population studied (McMillan & Schumacher, 2010).

The additional open-ended qualitative questions sought to identify factors that hinder or enhance the dimensions of labor market responsiveness based on the participants' experiences and perceptions. Open-ended questions are a form of explanatory research design that seeks to further understand the quantitative data findings. (McMillan & Schumacher, 2010; Michael Patton, 2002; Mildred Patton, 2012). This is an appropriate approach for attempting to address a gap in understanding related to the quantitative findings and is in alignment with the explanatory purpose of the study (Marshall & Rossman, 1999). The qualitative questions were included in the same survey as the quantitative questions to allow for data collection in a single phase. A sequential explanatory design was considered, however it is more cumbersome to implement as it requires quantitative data to be collected and analyzed in one phase and qualitative data in a second phase (Ivankova, Creswell, & Stick, 2006). A solely comparative research design was also considered to collect descriptive data and give focus to the difference in perceptions between two groups (McMillan & Schumacher, 2010). However, this study aims to identify factors that may explain the descriptive data results and required open-ended questions to draw out further information.

Population

A population is a group that shares specific characteristics, and that study findings can be generalized to (McMillan & Schumacher, 2010). The population for this study is

community college administrators in Washington State. Washington State provides a

prime environment to further study the labor market responsiveness of community

colleges. The community college system in Washington State includes 34 institutions

(see Appendix C); each with one president, at least three vice presidents and at least five

other administrators responsible for the college's programming decisions and

responsiveness to stakeholders. This provides a population of at least 302 community

college administrators.

<h1 style="text-align:center">Sample</h1>

A sample is the group of selected participants the study will collect information

from (McMillan & Schumacher, 2010). The sample for this study is community college

workforce education administrators in Washington State. Workforce education

administrators were selected because they are responsible for the workforce development

activities of their institutions and have a level of authority to impact change within the

labor market responsiveness dimensions of their institutions. Actual position titles for

workforce education administrators vary between institutions, but include coordinators,

directors, assistant deans, associate deans, deans and even vice presidents. Washington's

system also includes a WEC with representation by workforce education administrators

from each of the colleges. Attendance at these council meetings is limited to two

workforce education administrators per college, which provided access to at least 68

workforce education administrators. Washington State workforce education

administrators have decision-making authority over professional-technical certificate or

degree programs, or workforce related short-term and contract training programming.

Using the membership of the WEC for this study is a form of purposive sampling and

<div style="text-align:center">64</div>

was appropriate for both the quantitative and qualitative methods of this study as it identified a group of participants with the most information relative to the variables being studied (McMillan & Schumacher, 2010; Michael Patton, 2002).

Access to participants was established through the WEC with support from the WEC President. The State Board for Community and Technical Colleges (SBCTC) was also presented with a study overview and request for support in promoting participant response rates. The existence of the WEC and SBCTC provided greater accessibility and the potential for increased participant response rates due to pre-established relationships. In response to the email invitation, 39 participants volunteered to participate in this study.

Instrumentation

With permission from the U.S. Department of Education (see Appendix D), this study used the CCLMR assessment to gather data to identify colleges' ability to be responsive. As presented in the literature review in chapter II, this survey measures seven dimensions of responsiveness: (a) leadership and governance, (b) organizational structure, (c) organizational culture, (d) resources and funding, (e) information and data, (f) relationship building, and (g) partnerships. This assessment is structured with a 5-point Likert scale and has 70 questions requiring approximately 20 minutes to complete. In identifying how accurate each statement is to their perception of their institution, the response scale was as follows: 1 = Not at All; 2 = Slightly; 3 = Somewhat; 4 = Almost Always; 5 = Completely.

For this study, the CCLMR survey has been expanded to include open-ended questions to gather qualitative responses concerning factors that impact a college's ability to exhibit characteristics of each dimension of responsiveness. Therefore, it is referred to

as the CCLMR+ survey for this study. Within the CCLMR+, the open-ended questions are placed immediately following each section of labor market responsiveness characteristics they refer to. This provided qualitative data to explore potential patterns in systemic factors contributing to the success or failure of colleges to be labor market responsive.

Validity and Reliability

The CCLMR survey was developed through an extensive literature review and research of community colleges throughout the United States to identify the primary characteristics of colleges with strong labor market-responsiveness (MacAllum et al., 2004a). This strengthens content validity because the questionnaire was designed specifically to correspond to the characteristics deemed necessary for responsiveness (Field, 2013; Salkind, 2014). The CCLMR survey has not been extensively used in the field and its reliability has yet to be established, but the 5-point Likert scale will increase the reliability of the scores.

In terms of the qualitative questions, standardized open-ended questions were used that are in direct alignment with the secondary purpose of this study, which is to further explore the factors that hinder or enhance a community college's dimensions of labor market responsiveness. This approach is used to ensure all participants are presented with the exact same question and in the same order to increase accuracy in comparing results (Michael Patton, 2002). These questions were field tested by former workforce education administrators from Washington community colleges. A conventional pretest method with a supplemental formal respondent debriefing is a standard form of survey field testing (Presser et al., 2004). This was conducted by

debriefing each participant in person after they completed the survey questions to identify

and resolve issues with the questions. As a result of field testing, it was noted that the

columns of the Likert-type statements needed to be lengthened for ease of reading and

that the words 'hinder' and 'enhance,' along with the dimension each open-ended

question referred to needed to be emphasized to establish clarity for each. In response,

the Likert-type statement columns were lengthened and the suggested words were

changed to bold and italic for emphasis. There were no concerns with the content of the

survey questions. In addition to field testing, data collected was transcribed using low-

inference descriptors, meaning the descriptions were as close to literal as possible, which

enhances the validity of the research (McMillan & Schumacher, 2010).

Data Collection

After approval from Brandman University's Institutional Review Board (BUIRB),

participants were provided a letter of invitation (see Appendix E) and a copy of the

BUIRB Research Participant's Bill of Rights (see Appendix F) electronically.

Additionally, each participant completed an electronic Informed Consent form (see

Appendix G) prior to participation in the study. The consent form included an assurance

of confidentiality of the results and a full description of the research study per the

BUIRB's guidelines.

The CCLMR+ survey was delivered to participants electronically through the

WEC email distribution list. The emailed invitation to participate included a link to the

web-based survey generated using Survey Monkey, as well as providing the reason for

the study and a timeline for completion. Each participant was allotted a two-week

timeframe to complete the surveys. Support was secured from the President of the WEC,

who sent a responding email of support to the email distribution list. In addition, a reminder email was sent to gather additional participant responses. The CCLMR+ survey produced point-in-time interval data from Likert scale results and the qualitative responses were transcribed for further analysis of patterns and themes.

Data Analysis

A descriptive, explanatory research design was used to analyze the data collected through the CCLMR+ survey. Ordinal data collected from survey questions were analyzed to present a system-wide perception of Washington community colleges' ability to be labor market responsive based on the seven dimension studied. And the open-ended questions were analyzed to identify themes and patterns of factors that impact a community college's ability to be labor market responsive. The quantitative and qualitative processes of analysis for each research design are described below.

Quantitative Data

Microsoft$^\circledR$ Excel software was used to analyze quantitative data collected in this study. Analysis of the quantitative survey results included the frequency of scores and identifying measures of central tendency and variability for each of the seven Likert scales. Each Likert scale represents one of the seven dimensions of labor market responsiveness and includes several Likert items representing the characteristics of that dimension. For each Likert scale, a frequency of Likert item scores was presented by displaying the percentage of scores in chart form and as a bar graph. A display of frequency distribution is the most basic form of analyzing and displaying survey response data (Rae & Parker, 1993). To analyze measures of central tendency, scores for each Likert item were aggregated to produce median, mode and mean scores. The median

shows the midpoint of the scores, the mode shows the most frequent score, and the mean

shows the average score (McMillan & Schumacher, 2010). The variability of scores was

also measured by producing the standard deviation for each Likert item and scale. A

measure of variability is needed in addition to the frequency of score in order to show the

dispersion of scores from the mean (McMillan & Schumacher, 2010). All of the Likert

item measures where aggregated to produce Likert scale data, and in turn, also

aggregated for an overall labor market responsiveness score.

Qualitative Data

Analysis of the qualitative data included descriptive coding, frequency counting,

and identification of themes and patterns. To begin, each response was reviewed and all

segments – each independent concept presented by the participants – were identified. For

each identified segment, a potential code was assigned. Then the list of codes was

reviewed and revised until the coding identifiers were most representative of the concepts

presented in the qualitative responses. This is an inductive coding process in which

codes are established as a result of identified reoccurring topics within the responses.

During this process, a codebook was also created to provide descriptions for each

inductive code (see Appendix H). In the development of the codebook, the inductive

codes were also reviewed in order to establish categories of codes, which reflected initial

themes. The categories and codes were built into the NVivo software projects and were

revised during the coding process. In NVivo the categories were represented as 'parent

nodes' and the codes were represented as 'nodes.' These processes of establishing codes,

codebooks, themes and a project in NVivo were completed once for the enhancing factors

responses and separately for the hindering factors responses. This produced two projects in NVivo, two separate sets of inductive codes and two codebooks.

In addition to the researcher, a second coder was employed and an intercoder reliability assessment was conducted by running both a Kappa coefficient and intercoder agreement test in NVivo. The Kappa coefficient test identified the degree to which coding of text by multiple coders are similar. A kappa value of between 0.76 and 1 demonstrates excellent reliability, whereas a value between 0.40 and 0.75 is intermediate to good (McMillan & Schumacher, 2010). The kappa coefficient test results for all sources and codes for the enhancing factors was 0.93 and for the hindering factors was 0.82. The kappa values for both sets of data demonstrate excellent reliability. The intercoder agreement results for all sources and codes for the enhancing factors was 98.95% and for the hindering factors was 96.04%. Therefore the results of both tests demonstrate excellent reliability of the codes.

Frequency distribution reports produced by NVivo were also analyzed to confirm themes and establish patterns. In addition, direct quotes identified for each code will be presented to highlight findings related to the themes and patterns.

Limitations

The CCLMR+ is based on perceptions of the participants completing the survey. This could have impacted the study in terms of individual differences in perceptions of market responsiveness. This study attempts to minimize this impact by having multiple participants complete this survey within each institution and identifying the mean score for the system to identify the typical perception (McMillan & Schumacher, 2010). The response rate of participants may have also been hindered due to the length of time for

70

completion of the survey. Overall, the response rate was based on volunteer commitment from participants invited and not completely in the control of the researcher.

Summary

The research design selected for this study allowed for an extensive amount of data to be collected on the labor market responsiveness of community colleges in Washington State as perceived by workforce education administrators. The addition of qualitative questions provided further insights into the factors that may be enhancing or hindering the colleges' ability to display each dimension of labor market responsiveness. Together these methods provide a descriptive picture of the current state of community colleges' ability to be responsive to labor market needs and contribute to the state's economic development.

CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

Chapter IV presents the research, data collection and findings of this study. The purpose and research questions that guide this study are once again presented, as well as on overview of the research methodology and data collection procedures implemented. A review of the population and sample are also provided. A presentation of the data collected, both quantitative and qualitative, will comprise the core of this chapter and will follow with a discussion of the major findings.

Purpose Statement

The purpose of this mixed methods study is to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive as measured by the seven dimensions of the CCLMR assessment (leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building and partnerships). A secondary purpose of this study is to explore the factors that hinder or enhance the seven dimensions of a community college's labor market responsiveness.

Research Questions

1. To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's seven dimensions of labor market responsiveness?

   a) leadership and governance

b) organizational structure and staffing

c) organizational culture

d) resources and funding

e) information and data

f) relationship-building

g) partnerships

2. What factors hinder or enhance the seven dimensions of a community college's labor market responsiveness as perceived by workforce education administrators?

Research Methods and Data Collection Procedures

This study followed an explanatory research design, in which quantitative data was collected to describe and qualitative data was collected to further explain the descriptive data. The instrumentation used to collect this data was in survey form and included both Likert-type and open-ended questions. This instrument was developed with Survey Monkey software to generate an online survey and it was disbursed by email through the WEC email distribution list. Both the qualitative and quantitative data was collected in Survey Monkey for export to data analysis software.

The quantitative portion of this survey was adopted with permission from the U.S. Department of Education's CCLMR assessment. It includes multiple Likert item statements that form Likert scales for each of the seven dimensions of labor market responsiveness. Participants scored each Likert item on a scale of one to five (1 = Not at All; 2 = Slightly; 3 = Somewhat; 4 = Almost Always; 5 = Completely). These responses were transferred to Microsoft® Excel software for analysis.

Each Likert scale, representing one of the seven dimensions of labor market responsiveness, was followed by two open-ended questions to collect qualitative responses. These responses identify the participant's perception of factors that enhance and hinder their college's ability to be labor market responsive. These responses were transferred to NVivo software for analysis.

Population

The population for this study is community college administrators in Washington State. The Washington system, with 34 community and technical colleges, includes at least 300 administrators.

Sample

The sample for this study is community college workforce education administrators in Washington State. This includes varying position titles, but all of which have authority over workforce education programming at their colleges. The system has a council dedicated to workforce education (WEC), which includes at least 68 representatives (2 from each college). There were 39 participants in this study that volunteered in response to the email invitation dispersed through the WEC email distribution list.

Presentation and Analysis of Data

Degree of Labor Market Responsiveness

Research Question (RQ) 1 addresses the degree to which workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive based on seven dimensions of labor market responsiveness: (a) leadership and governance, (b) Organizational structure and staffing,

(c) organization culture, (d) resources and funding, (e) information and data, (f) relationship building, and (g) partnerships. Participants shared their perception of their college's demonstration of characteristics of labor market responsiveness in response to Likert item statements within each of seven Likert scales representing the seven dimensions. Based on aggregate data for all Likert scales, Figure 3 presents the overall perception of the labor market responsiveness of colleges. The majority of participants believe colleges are responsive at least somewhat (31%) or almost always (31%). However, only 16% feel colleges are completely responsive and 5% do not think colleges are responsive to the labor market at all.
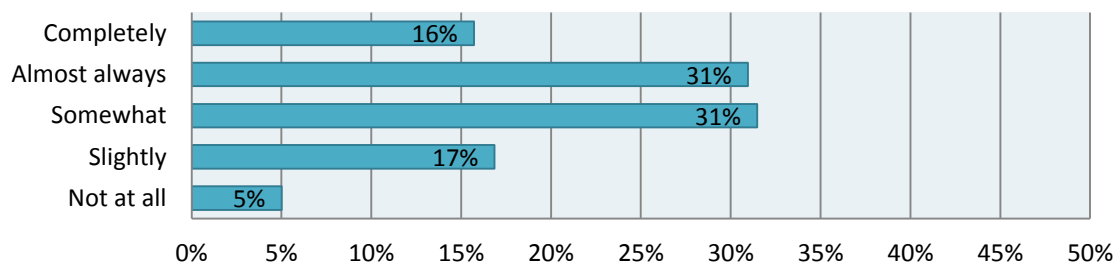
Figure 3. Overall perception of labor market responsiveness. Percentages represent the frequency of participant scores for all Likert items from all seven of the Likert scales.

In addition to the overall perception of labor market responsiveness, Table 2 presents the frequency of scores for each of the seven Likert scales in this study. This presentation of data shows colleges are strongest in the dimensions of leadership and governance and organizational culture, both areas show 28% believe colleges display these traits completely. On the contrary, the organizational structure dimension is perceived to be the weakest area for colleges with 15% stating it is not demonstrated at all and only 8% believing it is completely present. The perceptions of the other four dimensions (Resources and Funding, Information and Data, Relationship Building and

Partnerships) are relative to the overall perception of colleges' labor market responsiveness.

Table 2

Frequency of participant responses concerning Labor Market responsiveness dimensions

Dimension	*n*	Not at all	Slightly	Somewhat	Almost always	Completely	Total
Leadership & Governance	39	2%	7%	23%	39%	28%	100%
Organizational Structure	39	15%	23%	30%	24%	8%	100%
Organizational Culture	39	2%	14%	23%	33%	28%	100%
Resources and Funding	39	5%	20%	36%	28%	11%	100%
Information & Data	39	5%	19%	38%	30%	8%	100%
Relationship Building	39	3%	14%	33%	34%	16%	100%
Partnerships	39	3%	20%	38%	29%	11%	100%

By combining a couple sets of response options, a clearer picture of the perceptions for each dimension is presented in Figure 4. Based on these categories, again leadership and governance and organizational culture are clearly the strongest dimension of labor market responsiveness perceived to be demonstrated by colleges. Over 50% of respondents believe the other five dimensions are demonstrated at least some of the time, although they need to be further developed. However, the organizational structure dimension is the largest area of concern by 15% of the participants who perceive it to be nonexistent.
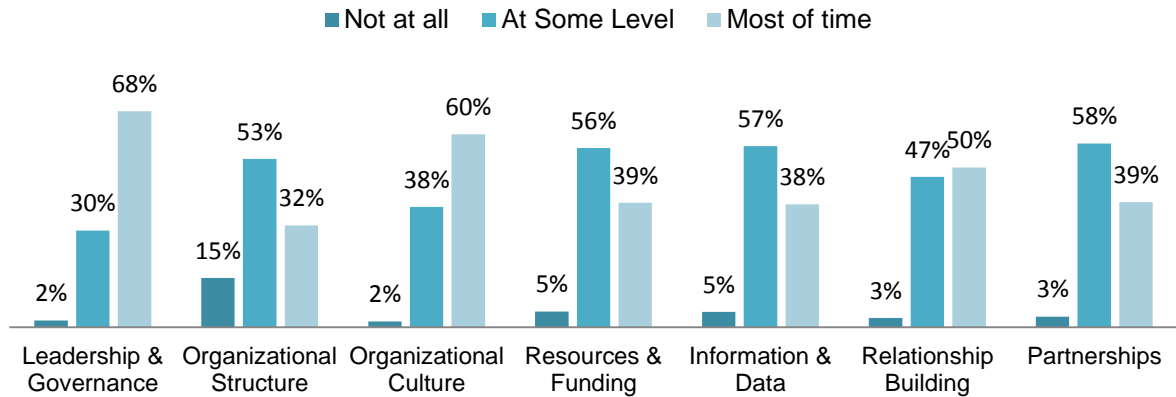
Figure 4. Frequency of scores categorized into three levels. The 'almost always' and 'completely' choices were combined into a 'most of time' category to represent the greatest level of existence of the dimension. The 'somewhat' and 'slightly' choices were combined into an 'at some level' category to represent at least some level of existence of the dimension. The 'not at all' option remained unchanged to reflect a complete absence of the dimension.

Data gathered in response to Likert item statements for each of these dimensions is presented and analyzed below, in addition to a Likert scale score for each dimension.

Leadership and governance. The majority of workforce education administrators (67%) perceive their colleges to almost always (39%) or completely (28%) demonstrate the labor market responsiveness characteristics of leadership and governance (see Figure 6). Overall, as Figure 5 displays, leadership and governance characteristics that support labor market responsiveness are perceived to be present at some level for 98% of the participants, while only 2% believe it is nonexistent.
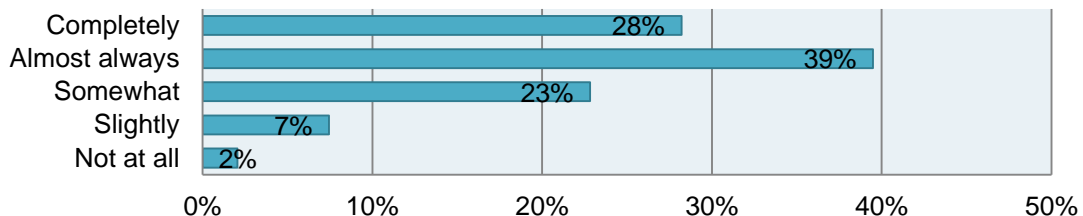
Figure 5. Overall perception of leadership and governance. The percentages represent the frequency of participant scores for all Likert items in the leadership and governance Likert scale.

Table 3 presents the frequency of responses for each statement (Likert item) for the leadership and governance dimension. The largest variance in perceptions was in response to statement 2 (S2) concerning the inclusion of labor market responsiveness in the college's mission. While 41% perceive this to be completely true at their colleges, 8% believe this does not occur at all. These are the highest percentages for both 'completely' and 'not at all' for Likert items in this scale, which with a standard deviation of 1.27 identifies this dimension as having the least heterogeneity in perceptions (see Figure 6).

The leadership and governance characteristic that participants believe to be at least occurring somewhat (21%), but almost always (56%) or completely (23%) is that their college leaders are visible in the community (S7). There were no responses indicating this is occurring only slightly or not at all. The standard deviation of responses was also the lowest for all Likert items in this scale at 0.67, which indicates high heterogeneity in the responses. The mode score of 0.67 for this Likert item also shows it was perceived most often by participants that their leaders are visible in the community (S7).

The characteristic that presented the highest perception of inexistence pertains to the sharing of local labor market information with employees (S9). Of the responses, 61% felt this was not adequate – not at all (5%), only slightly (18%), and only somewhat (38%) – and only 8% felt this was occurring completely. Figure 6 also presents the perception of sharing local labor market information with employees (S9) as the lowest ranking characteristic for this dimension.

Table 3

Frequency of participant responses concerning Leadership and Governance

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S1	College leadership is shared among multiple people.	39	3%	0%	23%	56%	18%	100%
S2	Labor market responsiveness is reflected in the college mission statement.	39	8%	8%	18%	26%	41%	100%
S3	Leader, especially the board and president, are fully and publicly committed to a labor-market-responsive mission.	39	0%	5%	21%	38%	36%	100%
S4	Leaders are actively involved in furthering that mission.	39	0%	5%	15%	44%	36%	100%
S5	Leaders maintain a vision beyond the traditional service area.	39	3%	15%	23%	36%	23%	100%
S6	Leaders portray the college as an economic development partner to the community.	39	3%	3%	15%	44%	36%	100%
S7	College leaders are very visible in the community.	39	0%	0%	21%	56%	23%	100%
S8	College leaders are well informed on economic and workforce trends.	39	0%	3%	33%	36%	28%	100%
S9	Leaders convey local market information to the broader campus.	39	5%	18%	38%	31%	8%	100%
S10	Leadership style is passionate, innovative, anticipatory, and entrepreneurial.	39	0%	18%	21%	28%	33%	100%

Note. S = Statement.

In addition, the presentation of frequency distribution displayed in Figure 7 also makes it evident most of the participants feel their leadership display a style that is supportive of labor market responsiveness (S10), as 'completely' was the rating that occurred the most for this Likert item. However the variability in scores was very high with a standard deviation of 1.11.
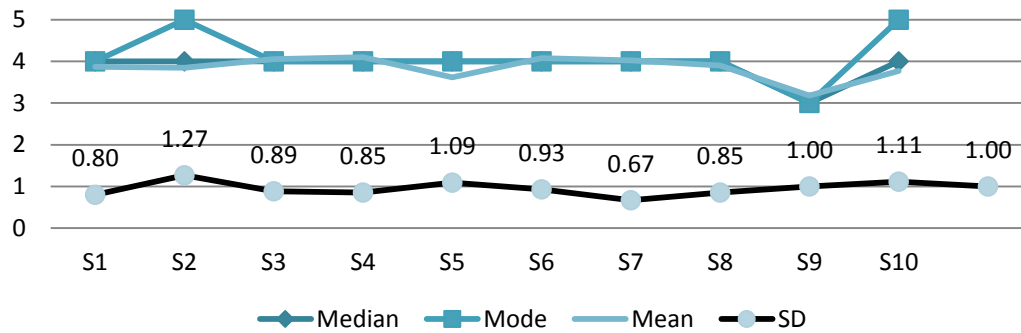
Figure 6. Frequency distribution and variance of leadership and governance scores.

Organizational structure and staffing. The largest portion of participants believes colleges somewhat (30%) display organizational structure and staffing characteristics that support labor market responsiveness. However, 15% do not believe this exists at all and only 8% believe it to be displayed completely (see Figure 7).
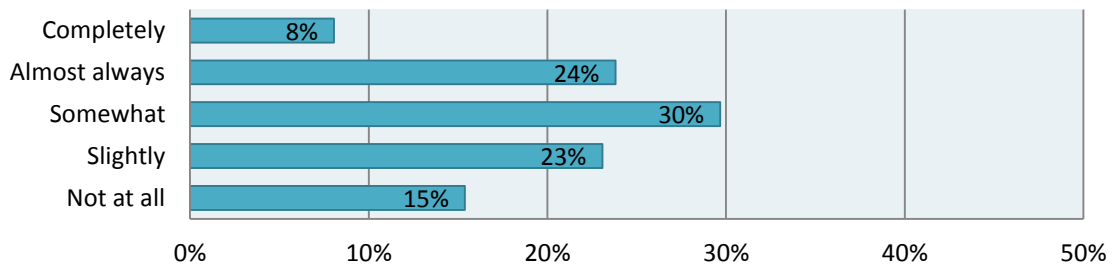
Figure 7. Overall perception of organizational structure and staffing. The percentages represent the frequency of participant scores for all Likert items in the organizational structure and staffing Likert scale.

The lowest mode score (1.0) for any Likert item in this scale shows the colleges' organizational chart and staffing structure (S12) do not reflect equal importance of credit and noncredit programming (see Figure 8). The majority of respondents (59%) do not feel this is demonstrated at all (33%) or only slightly (26%). Expanded details for each Likert item in this scale are presented in Table 4.

Table 4

Frequency of participant responses concerning Organizational Structure

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S11	The organizational chart and staffing structure of the community college reflect a commitment to labor-market-responsive services and programs.	39	10%	5%	44%	31%	10%	100%
S12	The college's organizational chart and staffing structure reflect the equal importance of credit and noncredit programs.	39	33%	26%	28%	8%	5%	100%
S13	Campus structure facilitates communication and access to the human and financial resources essential for labor-market-responsive activities.	39	5%	23%	31%	36%	5%	100%
S14	Credit and noncredit programs and their faculties collaborate to develop and deliver career-oriented training.	39	13%	31%	26%	21%	10%	100%
S15	Close working relationships between the credit and noncredit sides of the college enhance the college's ability to provide labor-market-responsive programs.	39	23%	21%	28%	23%	5%	100%
S16	Human resources are deployed in the most efficient manner to meet labor-market-responsive goals.	39	8%	38%	21%	28%	5%	100%
S17	Program development, outreach, and interaction are considered everyone's job.	39	15%	18%	31%	21%	15%	100%

Note. S = Statement

Although all perceptions of this dimension are low, the strongest characteristic, with a mode sore of 4.0, was having a structure that supports access to resources (S13). The results for this Likert item also showed the least variance in responses within this dimension. Overall, the mode scores for all Likert items in this dimension are the lowest of any of the scales in this study. The median for all responses is also no higher than three, representing only a somewhat to slight demonstration of organizational structure and staffing characteristics to support labor market responsiveness (see Figure 8).
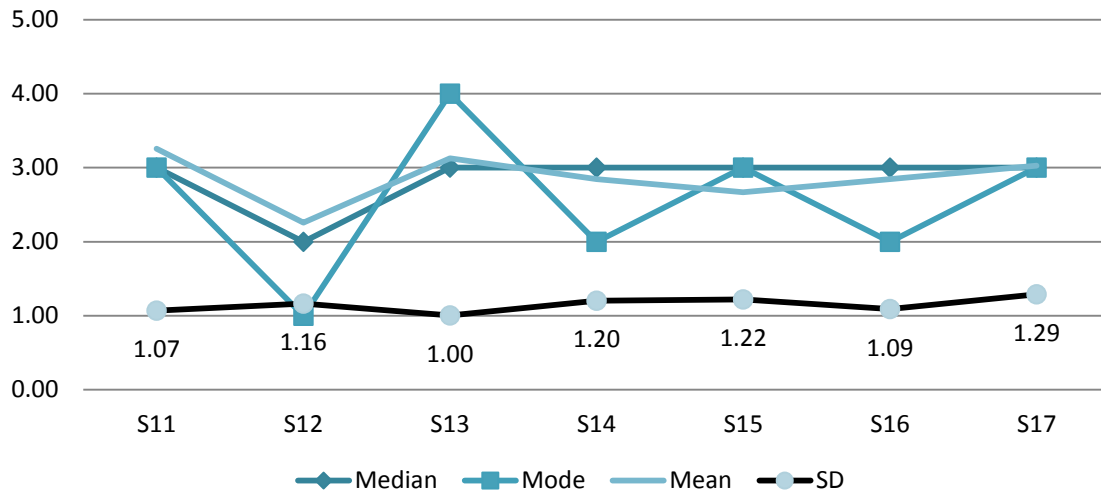
Figure 8. Frequency distribution and variance of organizational structure scores.

Organizational culture. The majority of respondents (61%) feel that an organizational culture that supports labor market responsiveness exists almost always (33%) or completely (28%) and only 2% do not perceive the existence of this characteristic at all (see Figure 9). Additional data is presented for each Likert item in this scale in Table 6.
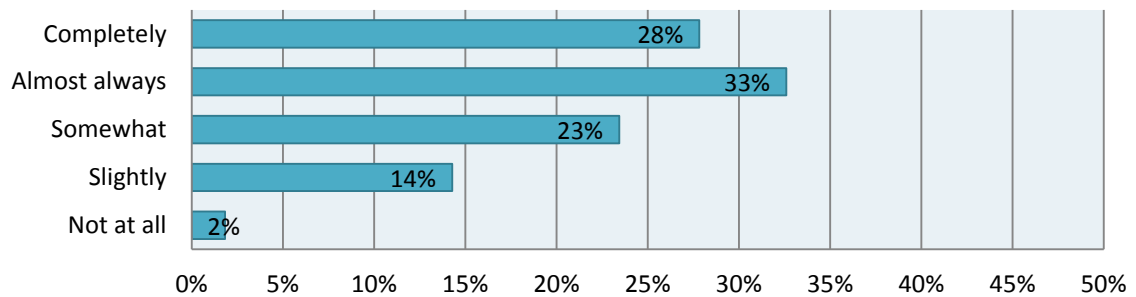
Figure 9. Overall perception of organizational culture. The percentages represent the frequency of participant scores for all Likert items in the organizational culture Likert scale.

Like the leadership and governance dimension, this is the only other dimension with any mode scores of 5 (see Figure 10). The majority of respondents also feel that colleges display every individual Likert item completely or almost always (see Table 5).

The largest majorities, however, present an alignment between workforce development strategies and community needs (S22 – 67%) and focus on relationships with business and industry (S23 – 74%).
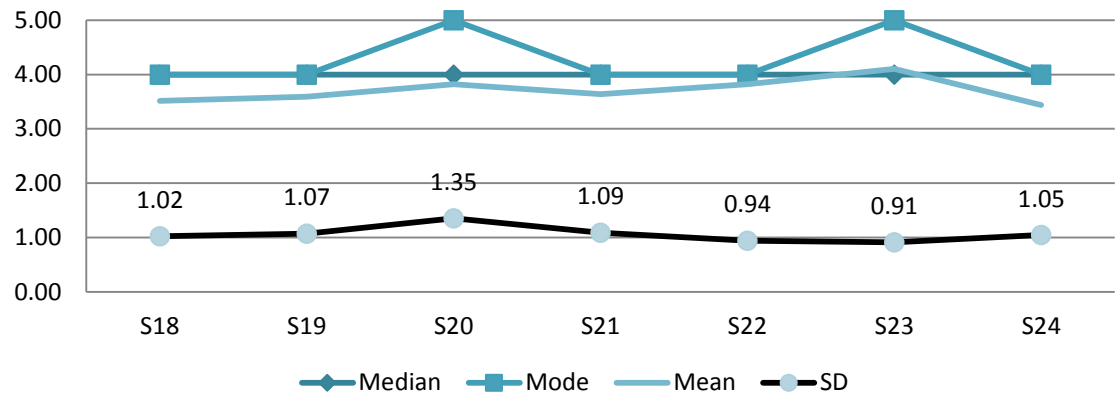
Figure 10. Frequency distribution and variance of organizational culture scores.

Table 5

Frequency of participant responses concerning Organizational Culture

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S18	A strong belief system embraces labor market responsiveness as a core mission.	39	0%	21%	26%	36%	18%	100%
S19	The college is characterized by flexibility, innovation, collaboration, and entrepreneurship.	39	3%	15%	23%	38%	21%	100%
S20	The college has a motto or theme that focuses attention on the mission of workforce and economic development.	39	8%	10%	23%	10%	49%	100%
S21	Leaders and staff are open to change, committed to serving students and employers, and respectful of workplace culture.	39	0%	21%	21%	33%	26%	100%

Table 5

Frequency of participant responses concerning Organizational Culture

Statement		n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S22	Workforce-development strategies reflect the cultures of the surrounding communities and specifically address local needs.	39	0%	10%	23%	41%	26%	100%
S23	There is a willingness to work closely with representatives from business and industry in the design, development, and delivery of education and training.	39	0%	5%	21%	33%	41%	100%
S24	College leaders, faculty, and staff share a common understanding of the proper balance of the college's multiple missions.	39	3%	18%	28%	36%	15%	100%

Note. S = Statement.

Resources and funding. The largest portion of respondents (36%) believes

colleges only somewhat have the resources and funding needed to support labor market

responsiveness (see Figure 11).

Figure 11. Overall perception of resources and funding. The percentages represent the frequency of participant scores for all Likert items in the resources and funding Likert scale.

An area of concern identified by respondents is insufficient human resources

dedicated to securing resources (S31). As shown in Table 6, the majority of respondents

(74%) believe necessary human resources are only dedicated somewhat (31%), slightly

(28%) or not at all (15%). However, as demonstrated by the most frequent response in

Figure 12, many feel that adequate resources are invested in the professional

development of the staff and faculty they do have (S34). Also demonstrated in this figure

is that two of the strongest areas within this dimension (S25 and S28) demonstrate an

institutional focus on securing non-state funds, especially for workforce development.

Table 6

Frequency of participant responses concerning Resources and Funding

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S25	The college aggressively pursues non-state sources of income.	39	0%	10%	36%	31%	23%	100%
S26	The widest possible range of funding streams has been explored.	39	5%	8%	51%	28%	8%	100%
S27	The college is innovative in developing and embracing new methods to raise funds for high-demand programs.	39	8%	18%	38%	26%	10%	100%
S28	The community college is creative in seeking new sources of income to finance workforce development.	39	0%	28%	26%	38%	8%	100%
S29	College leadership is strategic in leveraging resources and in-kind donations to support and expand partnerships.	39	0%	18%	33%	38%	10%	100%
S30	The college is successful in securing strong financial support from local sources.	39	0%	28%	44%	18%	10%	100%
S31	Sufficient human resources are dedicated to obtaining resources that support responsive programming and services.	39	15%	28%	31%	21%	5%	100%
S32	The college president, board members, and top administrators are personally invested in developing large-scale partnerships that fund responsive programs.	39	5%	23%	31%	23%	18%	100%
S33	Discretionary resources are allocated equitably between academic and occupationally oriented programs.	39	8%	21%	38%	26%	8%	100%
S34	Adequate resources are invested in the professional development of faculty and staff to enable them to effectively implement responsive programs.	39	8%	21%	31%	33%	8%	100%

Note. S = Statement.

85
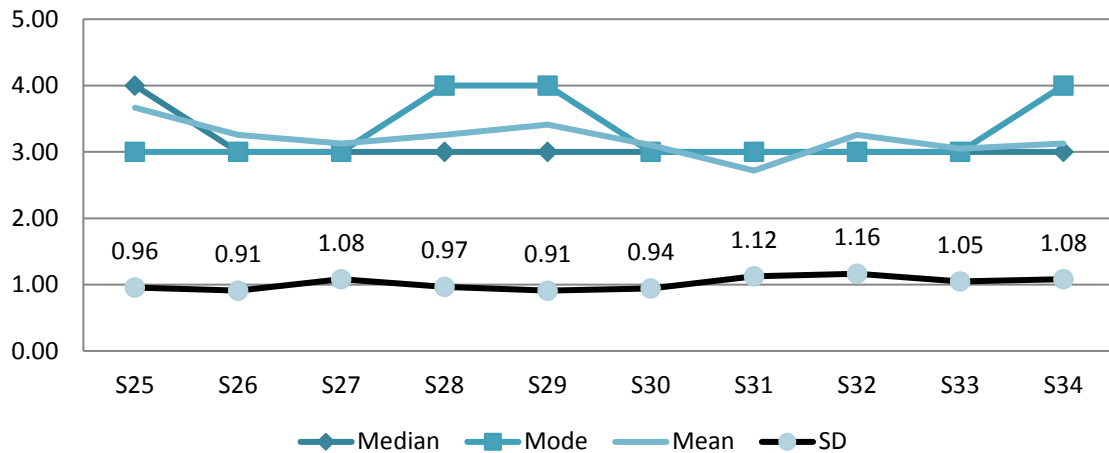
Figure 12. Frequency distribution and variance of resources and funding scores.

Information and data. The level of access to and use of information and data by colleges, as shown in Figure 13, is perceived to be only somewhat adequate by the most common participant response (38%). An additional 30% do feel this dimension is displayed almost always.

Figure 13. Overall perception of information and data. The percentages represent the frequency of participant scores for all Likert items in the information and data Likert scale.

Although the highest mode score in this scale highlights the use of evaluation of college programs and services (S38), it was only a score of four and the median score for all Likert items was only a three (see Figure 14). This shows that all of the characteristics in this dimension are predominantly perceived to only be somewhat displayed by

86

colleges. Table 7 shows the greatest area of nonexistence (13%) pertains to data-driven

decision making (S41). However, the strongest characteristic perceived by 46% of

respondents to be almost always (23%) or completely (21%) displayed by colleges is

engagement of leaders in the community to collect information (S36).

Table 7

Frequency of participant responses concerning Information and Data

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S35	The community college relies on local information-gathering and published data to drive strategic planning for its responsive programs and services.	39	0%	10%	44%	38%	8%	100%
S36	The college has cultivated a network of well-positioned leaders in the community to provide information about local needs and trends.	39	0%	21%	36%	23%	21%	100%
S37	College leaders and staff are well-informed about the needs of local business and industry and future economic trends.	39	0%	13%	46%	28%	13%	100%
S38	The college evaluates the impact of its market-responsive programs and services.	39	8%	26%	26%	38%	3%	100%
S39	The college assesses the value of labor-market-responsive programming and services and these assessments lead to programmatic change.	39	5%	15%	44%	33%	3%	100%
S40	The college evaluates the satisfaction of local businesses, partners, students, and their employers.	39	8%	28%	33%	26%	5%	100%
S41	Anticipatory thinking, based on solid information and data, pervades campus culture, informs outreach to partners, and shapes future vision.	39	13%	21%	36%	23%	8%	100%

Note. S = Statement.
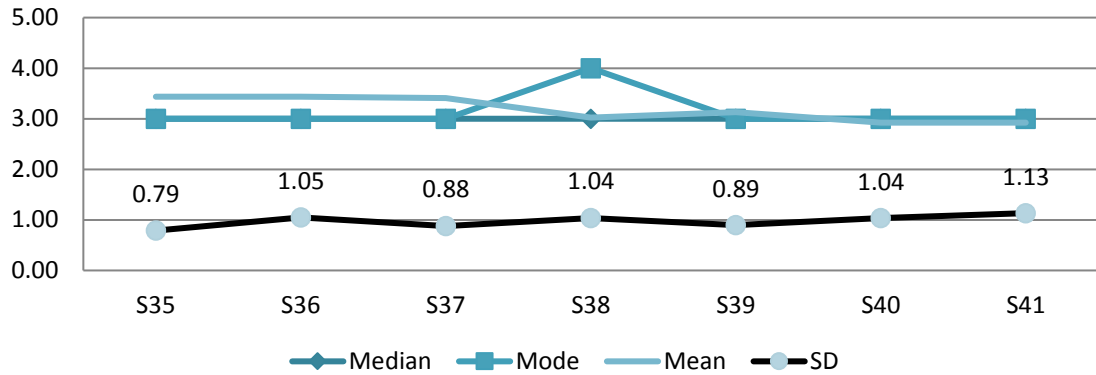
Figure 14. Frequency distribution and variance of information and data scores.

Relationship building. The majority of respondents (67%) feel colleges somewhat (33%) or almost always (34%) display relationship building characteristics (see Figure 15).
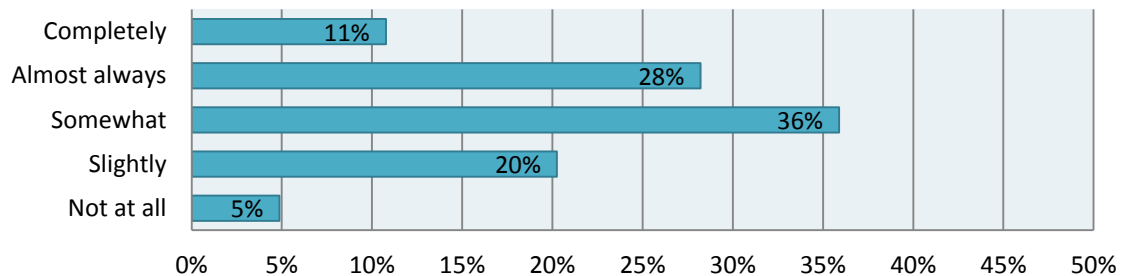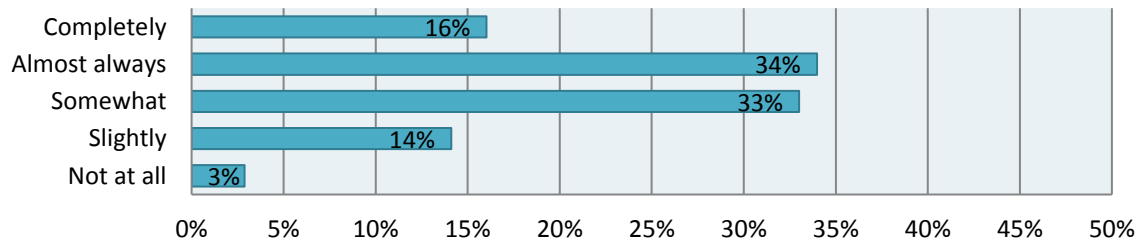

Figure 15. Overall perception of relationship building. The percentages represent the frequency of participant scores for all Likert items in the relationship building Likert scale.

As presented in Table 8, respondents predominantly feel college presidents and trustees communicate a mission of labor market responsiveness (S46 – 33% almost always and 21% completely) and external relationships are developed (S43 – 44% almost always and 18% completely). However, Figure 16 shows the greatest variance in responses is concerning whether relationship building is everyone's job (S45). Twenty-three percent believe this is occurring completely, but 15% believe this does not exist at all.

Table 8

Frequency of participant responses concerning Relationship Building

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S42	The college reaches out to students, businesses, and other organizations to gather information about general economic conditions and specific employer concerns.	39	0%	23%	44%	21%	13%	100%
S43	The college develops relationships with a wide variety of local organizations that could strengthen its ability to be responsive.	39	0%	8%	31%	44%	18%	100%
S44	Leaders and staff take an active and aggressive stance in reaching out to the community.	39	3%	15%	28%	38%	15%	100%
S45	Relationship-building is recognized as everyone's job.	39	15%	5%	23%	33%	23%	100%
S46	The trustees and president communicate the college's mission of labor market responsiveness in the public eye and in circles of influence.	39	0%	10%	36%	33%	21%	100%
S47	The college seeks out new ways to market itself, regionally and nationally.	39	0%	23%	31%	31%	15%	100%
S48	Marketing activities encourage others to approach the college as a partner.	39	5%	15%	41%	31%	8%	100%
S49	Strategic relationship-building is recognized as the foundation for establishing strategic partnerships.	39	0%	13%	31%	41%	15%	100%

Note. S = Statement
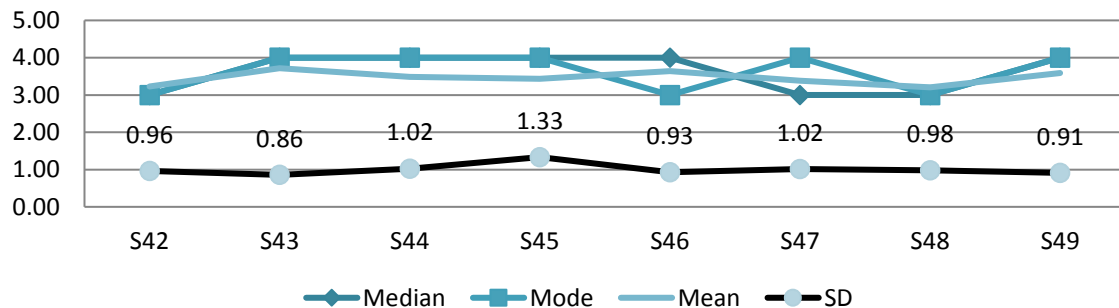
Figure 16. Frequency distribution and variance of relationship building scores.

Partnerships. The most frequent response from participants (38%) identifies colleges as displaying partnership characteristics only somewhat (see Figure 17).
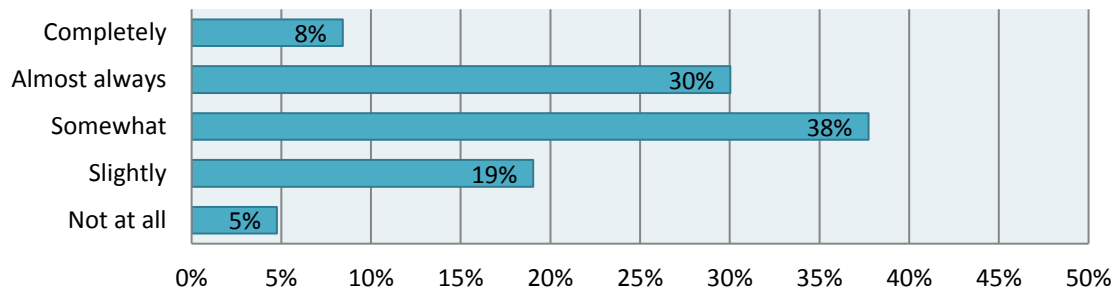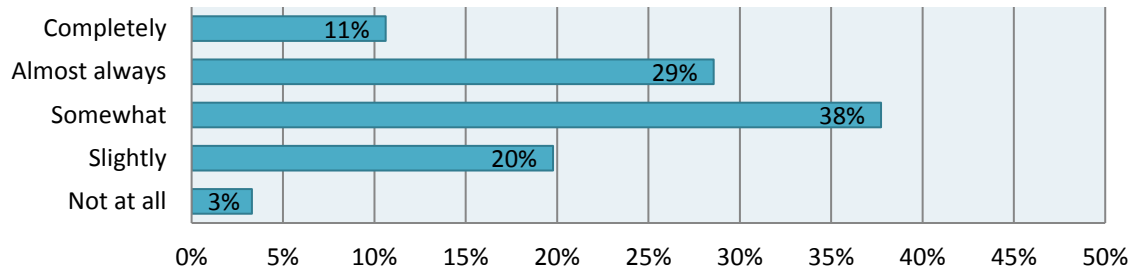

Figure 17. Overall perception of partnerships. The percentages represent the frequency of participant scores for all Likert items in the partnerships Likert scale.

As Table 9 presents, the characteristic that 51% of respondents felt colleges displayed the most (41% almost always and 10% completely) for the partnership dimension was engagement in partnerships with employers (S50). The characteristic perceived to be the least displayed by colleges was encouraging and rewarding staff for entrepreneurial activities (S55). The majority (64%) feel entrepreneurialism is only somewhat (28%) or slightly (36%) supported, and 10% believe it is not supported at all. The perceptions for the remainder of the characteristics were in alignment with the overall perception of the partnership dimension.

Figure 18 also presents a low perception of the acceptance of entrepreneurial staff and activities with a median score of only 3.0 and the most common response as 2.0 (S55). The standard deviation for this response was also the highest for this dimension at 1.11, showing a large variance in perceptions about the support of entrepreneurialism throughout the system.

Table 9

Frequency of participant responses concerning Partnerships

	Statement	n	Not at all	Slightly	Somewhat	Almost always	Completely	Total
S50	The college is engaged in sustained, successful employer partnerships that are responsive to the local market.	39	0%	10%	38%	41%	10%	100%
S51	The college has established strategic priorities for partnership-building with employers, aligned with the community's needs.	39	8%	13%	36%	26%	18%	100%
S52	The partnerships in which your college takes part anticipate local economic development and growth.	39	0%	10%	44%	28%	18%	100%
S53	The college has identified and partnered with the right mix of organizations.	39	0%	23%	44%	31%	3%	100%
S54	The college partners with large employers and innovative industries.	39	0%	21%	33%	36%	10%	100%
S55	The college encourages and rewards its staff for entrepreneurial activity.	39	10%	36%	28%	18%	8%	100%
S56	Partnerships are assessed and maintained in proportion to the ability to leverage long-term outcomes and opportunities.	39	5%	26%	41%	21%	8%	100%
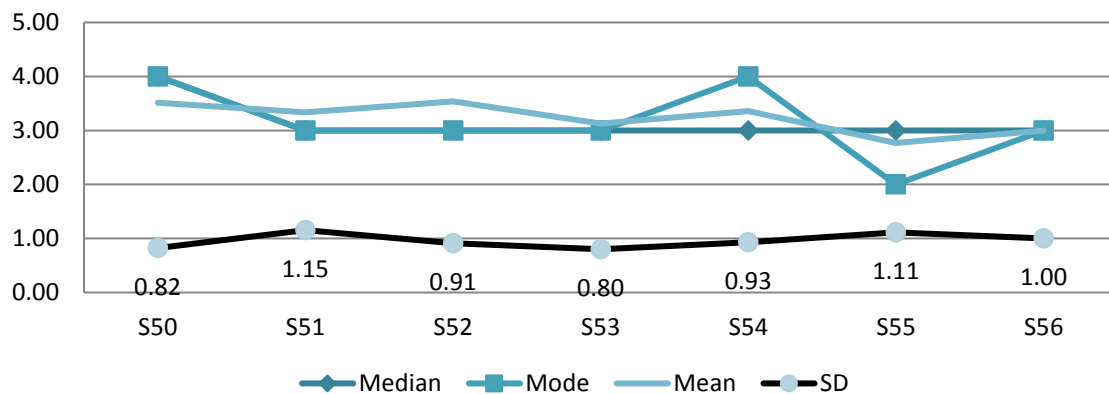
Figure 18. Frequency distribution and variance of partnerships scores.

Enhancing and Hindering Factors

RQ2 explores the factors that enhance or hinder the labor market responsiveness of community colleges in Washington State. Participants were asked to separately identify factors that enhance and hinder; responses were transcribed into separate projects for each. Transcribed responses and the corresponding data for both enhancing and hindering factors are presented and analyzed below.

Enhancing factors. The open-ended questions were optional for respondents and 32 of the 39 respondents (R) contributed responses to the enhancing factors open-ended questions. Based on their responses, numerous inductive codes were established and Table 10 presents the eight themes which emerged through the coding process. Each of these themes will be presented below, including presentation of the inductive codes and in vivo codes pertaining to each. The codebook for enhancing factors includes descriptions of each inductive code. Inductive codes discussed below are identified in parentheses for each statement. In addition to the data presented below frequency distributions for all enhancing factors are presented in Appendix I.

Table 10

Enhancing Factor Themes Emerged from Coding

Inductive Code	$n = 32$	Respondents	Frequency
Resources		26	80
Leadership		22	44
WFFocus		21	43
Engagement		16	44
Organization		15	31
AlignmentFocus		10	13

Table 10

Enhancing Factor Themes Emerged from Coding

Inductive Code	$n = 32$	Respondents	Frequency
AdvisoryBodies		9	27
PartnershipPromoters		9	14
Experience		8	13
Entreprenuerial		5	12

Theme one: Resources. The strongest theme for enhancing factors was adequate

resources for community colleges to be labor market responsive (Resources). This theme

was supported by 80 statements from 26 of the 32 respondents (81%) contributing

thoughts concerning enhancing factors (see Table 11). The majority of responses within

this theme focused on the positive impact of financial resources (FinancialResources).

Respondents felt their college's focus on seeking grant funding and their success with

securing grant funds support workforce education. One also contributed that: "*The*

college has been able to receive a fair amount of grant/soft funds due to our proposals

connecting training programs to labor market responsiveness" (R6). Much of these

efforts are reported to be supported by dedicated staff, or specifically grant writers, that

seek grants for workforce education.

In addition, there were several responses focused on the positive impact of access

to and use of information and data (Information). Several identified access to labor

market data as increasing data-driven decision making, including the following

statement: "*having readily accessible labor market data helps to inform decision making*

and put economic/workforce issues at the forefront" (R2). This is increased with

effective Institutional Research departments, which have access to the data and software

tools they need. Several respondents appreciate the development of data dashboards for

employees where "*data is at everyone's fingertips*" (R4). Respondents also felt they were supported through access to data from Employment Security Department and surveys they develop internally.

A few respondents felt human resources (HumanResources) and a strong college foundation (Foundation) were influential. A couple respondents emphasize the role of the foundation by stating, "*Our college has a very effective Director of the Foundation. He aggressively pursues funding and very liberally disburses funding in both academic and prof-tech programs*" (R29) and "*our foundation has tripled its funds raised in the last two years and they are beginning to launch specific campaigns to support new program development*" (R36).

Table 11

Coding Frequencies for Resource Factors

Inductive Code	$n = 32$	Respondents	Frequency
Resources		26	80
Financial Resources		20	38
Information		15	28
Human Resources		4	6
Foundation		4	5

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme two: Leadership. The second strongest theme for enhancing factors is the support from college leadership for workforce development (Leadership). This theme was supported by 44 statements from 22 of the 32 respondents (69%) contributing thoughts concerning enhancing factors (see Table 12). Although a couple respondents also referenced the role of a strong leadership team (LeadCollaboration), the majority of responses highlighted the impact of leadership's commitment to and engagement in workforce development (LeadCommitment). In addition to general leadership

commitment, 14 respondents emphasized the role workforce development commitment and engagement from the president of the college played in labor market responsiveness.

Respondents also emphasized the importance of leaders' empowerment of staff to fulfill their workforce development role (LeadEmpowerStaff). The ways in which leaders empower staff include "*strong attention to and support for professional development*" (R33) and ensuring staff are informed and involved. One respondent highlighted the frequency of information sharing: "*At bi-monthly All Staff Meetings there are regular updates on community outreach activities. These are also regularly mentioned in the president's weekly email update to the campus*" (R36). Another respondent shared the impact of staff recognition: "*staff that develop new partnerships are publicly acknowledged and thanked for their work*" (R36).

The effectiveness of leaders was also called out in terms of their leadership styles and skills (LeadEffective). Leaders that are seen as visionary and proactive are believed to strengthen a college's labor market responsiveness. They "*keep abreast of changing economic conditions and find ways to respond to them*" (R7), "constantly review information for opportunities" (R8), and employ "*lots of strategic thinking and visioning*" (R34).

Table 12

Coding Frequencies for Leadership Factors

Inductive Code	$n = 32$	Respondents	Frequency
Leadership		22	44
Lead Commitment		14	22
Lead Empower Staff		9	12
Lead Effective		5	7
Lead Collaboration		2	3

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme three: Workforce focus. The third strongest theme for enhancing factors

is the existence of factors that emphasize workforce development activities and

workforce education (WFFocus). This theme was supported by 43 statements from 21 of

the 32 respondents (65%) contributing thoughts concerning enhancing factors (see Table

13). The most frequent response related to the positive impact of the inclusion of

workforce education in the college's mission statement (MissionWFEd). A respondent

emphasized that "*when your mission is to fulfill the needs of individuals, business and

industry, then there is a direct relationship with market responsiveness*" (R14), while

another respondent stressed the solidarity around the mission by stating, "*our mission is

workforce education and everyone is united about it*" (R19). A number of the

respondents also felt their college leadership gave increased focus to securing alternative

funding (FundAltFocus) to support workforce education. This focus is new to some

colleges as presented by one respondent: "*I feel like our college is finally moving and

investigating the possibility of becoming more entrepreneurial by seeking out grants and

other sources of non-state funding*" (R20). In addition, a few respondents felt that their

ability to be labor market responsive was a result of an understanding of the needs of

workforce education programs by their peers and leadership (WFEdUnderstanding),

including the need to be nimble and flexible.

Table 13

Coding Frequencies for Workforce Focus Factors

Inductive Code	$n = 32$	Respondents	Frequency
WFFocus		21	43
MissionWFEd		10	15
FundAltFocus		8	8

Table 13

Coding Frequencies for Workforce Focus Factors

Inductive Code	*n* = 32	Respondents	Frequency
WFEdUnderstanding		5	6
StratPartner		3	3
FundRequiresFocus		2	2
StratPlan		2	2
WFEdOfferings		2	2

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme four: Engagement. The fourth strongest theme for enhancing factors is the involvement of the college in economic development activities and partnerships (Engagement). This theme was supported by 43 statements from 16 of the 32 respondents (50%) contributing thoughts concerning enhancing factors (see Table 14). This theme emphasizes the importance of general engagement in the community to gather information, promote offerings, and develop partnerships. As one respondent notes, "*real time trends are a result of attendance at meetings in the local community*" (17). In addition, engagement with specific types of economic development partners was also noted by respondents. Of these types of partners, business and industry was the most commonly identified as necessary for strengthening labor market responsiveness.

Table 14

Coding Frequencies for Engagement Factors

Inductive Code	*n* = 32	Respondents	Frequency
Engagement		16	44
EngageBusIndust		5	7
EngageWDC		3	5
EngageIndustry		3	4
EngageColleges		2	2
EngageHS		2	2

Table 14

Coding Frequencies for Engagement Factors

Inductive Code	$n = 32$	Respondents	Frequency
Engagement		16	44
EngageElectedOfficials		1	1
EngageLabor		1	1
EngageEDC		1	1

Note. The highlighted code includes frequency counts for all inductive codes in this theme.

Theme five: Organizational supports. The fifth strongest theme for enhancing factors is elements of the organization's structure and culture that support workforce education. This theme was supported by 31 statements from 15 of the 32 respondents (47%) contributing thoughts concerning enhancing factors (see Table 15). The most repeated reference within this theme was to the collaboration between credit and noncredit staff (CredNonCred). In specific, as one respondent noted, "the credit and noncredit staff work together to determine training options in responding to labor market needs" (R11). A few also emphasized the impact of having credit and noncredit within the same workforce education department. There was also acknowledgement by several concerning the positive role a department dedicated to institutional research has on labor market responsiveness (IRDept). In addition, the strength of noncredit programming (NonCredit), the existence of career services for students (CareerServices), and the impact of training staff to be cross functional (CrossFunctional) were also mentioned.

A couple of respondents also recognized the impact a department dedicated to business engagement has on their ability to be labor market responsive. As one explained, "*The development of a department focused on business engagement and workforce development was a huge accomplishment that will strengthen responsiveness*"

(R5). While the other shared the motto of their business engagement department, which

emphasizes a commitment to being an economic development partner and labor market

responsive: "*Enhancing Economic Vitality through a Highly Skilled Workforce*" (R25).

Table 15

Coding Frequencies for Organizational Support Factors

Inductive Code	*n* = 32	Respondents	Frequency
Organization		15	31
CreditNonCredit		8	9
IRDept		4	4
TechCollege		3	6
NonCredit		3	3
CareerServices		2	3
BusEngageDept		2	2
CrossFunctional		2	2

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Other themes. Several other themes with the percentage of respondents below

35%, yet above 10%, were also identified and are briefly represented below.

Alignment. Many respondents (31%) emphasized the alignment between their

college's priorities and economic or workforce development (AlignmentFocus). One

respondent shared that their "*vision statement includes a sentence that says 'we will be a

driver in the local economy'*" (R17). While another respondent summarizes the general

role of the community college in economic development: "*College strategic priorities

include aligning educational programs with regional and State economic development

strategies with a focus on developing, offering, and evaluating programs to provide an

educated workforce in support of economic development priorities*" (R1).

Advisory bodies. Advisory bodies (AdvisoryBodies) were referenced as important

to being labor market responsive 27 times by 28% of the respondents. They believe it is

important to have active and engaged advisory bodies for workforce education programs, as well as appropriate representation from business and industry (AdvBodyMembers). As noted by one respondent, "*strong partnerships with advisory committee members is the most consistent means of communicating with local industry*" (R23). Advisory bodies also contribute "*guidance for curriculum, equipment, internships and return to industry experiences for faculty*" (R8).

      Partnership promoters. Several factors that promote partnerships (PartnershipPromoters) were recognized by 28% of the respondents. Several respondents shared how their college publicly recognizes their economic development partners (PartnerRecognition), including through "*Advisory Committee Appreciation Dinners…social media, website, news releases, [and] president's weekly email update*" (R36). Respondents also noted linkages between workforce education programs and specific partners (ProgramPartners), the significant role a community college plays in its community (Location), colocation of the college with partners (CoLocation), and work-based learning activities (WBL) as others factors that promote partnerships.

      Experience. Some of the respondents (25%) spoke to the experience of staff and leadership (Experience) at their colleges as having an impact on their ability to be labor market responsive. Some emphasized workforce education experience (ExperienceWFEd) and a couple emphasized knowledge of the local economy (ExperienceIndustry) and acknowledge the extensive experience of their workforce education faculty (ExperienceFac), among other references (13 total). One respondent identified "*senior leaders with more than forty years in the area of Workforce Education as administrators in Washington state*" (R8).

Entrepreneurialism. A few respondents (16%) identified characteristics of

entrepreneurialism that are displayed and supported by their college (Entrepreneurial).

The most commonly referenced characteristic within this theme was innovation

(Innovation). One respondent even noted that their college has a "*Dean of Innovation*"

(R34).

Hindering factors. Like the enhancing factors, open-ended questions for the

hindering factors were also optional for respondents and 33 of the 39 respondents

contributed responses. The responses produced many inductive codes and 11 themes

emerged through the coding process (see Table 16). Each theme and its corresponding

inductive and in vivo codes are presented below. Inductive codes discussed below are

identified in parentheses.

Table 16

Hindering Factor Themes Emerged from Coding

Inductive Code	$n = 33$	Respondents	Frequency
ResourceLimits		28	122
OrganizationBarriers		24	61
LeaderLimits		15	26
WFFocusLimited		12	34
CommunicationBarriers		10	14
EngagementLimited		9	13
EntreprenuerialBarriers		7	8
LocationLimit		6	9
MarketingLimits		6	8
AlignmentFocusLimited		4	5
Competition		4	4

Theme one: Limited resources. The strongest theme for hindering factors is

colleges do not have the resources necessary to be labor market responsive

(ResourceLimits). This theme was supported by 122 statements from 28 of the 33

respondents (85%) contributing thoughts concerning hindering factors (see Table 17).

The majority of respondents within this theme addressed the need for increased human

resources (HumanResourcesLimits). Many of the respondents felt more human resources

were needed to meet time requirements necessary to develop new programs, foster

relationships, or secure alternate funding sources (TimeLimited). One respondent's

statement mimics so many others: "*We want to be responsive despite the confines of*

available time and resources" (R11). Overall, there is concern with large workloads

related to workforce development and inadequate staffing levels to manage activities that

promote labor market responsiveness.

      Secondly, respondents gave focus to the limitation of financial resources (Fiancial

ResouresLimits). Respondents emphasize that "*workforce programs are traditionally*

more expensive to run" (R39). Many feel there is not enough funding dedicated to

workforce education and some feel the new state allocation model does not support

workforce education. There is also a shortage of capacity to seek grant funding or

alternative resources. As one respondent sums up, "*it is difficult to develop new*

programs that are responsive to economic and workforce needs due to the costs

associated with new faculty, curriculum development, and equipment" (R2).

      In addition, respondents feel the colleges do not have adequate access to

information to support labor market responsiveness (InformationLimits). There may be

limited or no access to real-time and local data, and as a result limited knowledge about

the local economy. One respondent sums this up by stating there is a "*lack of nimble,*

accessible local and regional workforce data – we have to rely on…anecdotes and

struggle to find consistent data with our existing systems" (R34). There is also a limited

ability to track student outcomes and one respondent emphasizes this by stating "*there is*

not a good system to track graduate success…the college is primarily reliant upon

graduates to inform us of their employment success or challenges" (R39). And several

respondents were concerned that there was limited internal knowledge and understanding

about workforce education offerings, impacts and students (KnowledgeWFEd). To sum

this up, it is felt that workforce education is "*often considered not as important as*

academic transfer" (R15) there is a "*lack of understanding or unwillingness to accept the*

culture outside of 'transfer' degrees by some" (R30).

Table 17

Coding Frequencies for Resource Factors

Inductive Code	$n = 33$	Respondents	Frequency
ResourceLimits		28	122
HumanResourcesLimits		20	43
FinancialResourcesLimits		17	35
InformationLimits		16	29

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme two: Organizational barriers. The second strongest theme for hindering

factors is that elements of the organization's structure and culture do not support labor

market responsiveness (OrganizationBarriers). This theme was supported by 61

statements from 24 of the 33 respondents (73%), as represented in Table 18. The most

common responses within this theme related to faculty imposed barriers to the college's

ability to be labor market responsive (FacultyBarrier). The strong role of transfer faculty

in steering college priorities (TransferFacLead), limited flexibility in hiring faculty to

meet programming needs (FacHiringLimits), and programming decision based on current

103

faculty instead of labor market information (FacProgDecision) were a few of the specific concerns mentioned.

In addition, many noted a lack of support for non-credit programming (NonCredBarrier) and limited internal collaboration for workforce development (CollaborationLimit). A respondent summed up many of the comments by stating, "*enrollment and FTEs is such a focus that credit bearing is perceived as more important than none*" (R6). Another respondent took it further to emphasize a fear of non-credit programming; "*hesitation from the credit side of the house with assumptions that the non-credit programs endanger the credit programs*" (R25). And one respondent explained the extent of siloing at their college: "*the continuing education and contract training departments are kept in isolation from the rest of the institution*" (R5).

There was some acknowledgement of the creation or growth of Institutional Research departments (IRDeptLimits), but concern that staffing levels were not yet adequate or that workforce education staff were not working with these departments. There was also concern by a few that the organizational chart was not adequate to support workforce development (OrgChartLimit), the program review process did not result in change when needed (ProgramReview), and institutional processes impede program development (Bureacracy). To sum up some of these concerns, one respondent offered these statements: "*The workforce education departments are much smaller on the organizational chart. There are very few administrators dedicated and focused on workforce development and business engagement. We do not have a process for reviewing labor market information for program reviews and are not making program change decisions based on data*" (R5).

A few also noted a general resistance to change (ChangeResist) and maintenance of the status quo.

Table 18

Coding Frequencies for Organizational Barrier Factors

Inductive Code	$n = 33$ Respondents	Frequency
OrganizationBarriers	24	61
FacultyBarriers	10	13
NonCredBarriers	8	11
CollaborationLimit	7	10
IRDeptLimits	5	7
ChangeResist	3	4
OrgChartLimit	2	3
WFAdminLimits	3	3
ProgramReview	2	2
Bureaucracy	2	2

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme three: Leadership limits. The third strongest theme for hindering factors is that leadership actions do not support labor market responsiveness (LeaderLimit). This theme was supported by 26 statements from 15 of the 33 respondents (45%) contributing thoughts concerning hindering factors (see Table 19). Many commented that the effectiveness of their leadership was limited by their leadership style or skills (LeadEffectLimited). Respondents referred to a "*lack of a clear message from leadership" (R10), "most often reactive, not anticipatory or proactive*" (R29), and "*poor at communications, articulating vision and inspiring others*" (R32). High turnover in leadership was also noted by many respondents as an obstacle (LeadTurnover). One respondent shared the challenge of turnover and acquiring the necessary leadership skills: "*[I]t is becoming more difficult to identify staff with the comprehensive set of skills required to lead comprehensive community and technical colleges. Staff are required to*

105

be innovators, grant writers, facilitators of faculties, understand regional/national

accreditation, course and program assessment and manage limited state resources. So, it

is encumbrance upon administration to continue mentoring/coaching new and potential

candidates for administrative roles in order to remain competitive and relevant" (R8).

A few believe there is limited commitment or engagement of their leadership in

workforce development (LeadCommittentLimted). A couple respondents spoke to a

perceived favoritism of certain staff over others and the impact it had on workforce

education developments (LeadFavor).

Table 19

Coding Frequencies for Leadership Limits Factors

Inductive Code	$n = 33$	Respondents	Frequency
LeaderLimits		15	26
LeadEffectLimited		7	10
LeadTurnover		6	7
LeadCommittmentLimited		3	4
LeadFavor		2	2

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Theme four: Limited workforce focus. The fourth strongest theme for hindering

factors is that workforce education and development is not strongly supported within the

college (WFFocusLimit). As presented in Table 20, this theme was supported by 34

statements from 12 of the 33 respondents (36%). Six of the respondents identified a

higher priority for transfer programming than workforce education (TransferPriority).

The following sampling of the responses highlight the perception that workforce

education does not receive equal priority: "*Lack of equity between transfer programs and*

workforce in both leadership and student services" (R38); "*Segmented approach to*

student services that focuses on transfer students" (R38); "*A belief that the community*

106

college is an academic transfer institution" (R5); and "*The organizational structure and staffing are designed for academic transfer*" (R37). And as was noted in the leadership limits theme, a lack of vision was also included in this theme, but specifically concerning a lack of clear vision related to the college's role in economic development (VisionEDUnclear).

A few respondents commented about the existence of disrespect for workforce programs and their administrators, faculty and even students (WFEdDisrespect). As noted by one respondent, there is a "*perception by some that workforce education is a lesser-than pathway and that transfer oriented programs and faculty are more significant*" (R33). One respondent even felt "*there is outright refusal to participate in (and sometimes actual sabotage of) workforce development mandates and published college goals by many of the staff and faculty who don't see the value in workforce development*" (R29).

Other respondents feel there is limited external focus (ExternalFocusLimited), no focus on securing alternative funding (FundAltFocus-), limited efforts outside the workforce education staff (WFEffortLimit), and no support for workforce development in the college's mission (MissionBarriers). As one respondent notes, "*there is much of the institution that is internal focused and does not see their role with external relationships*" (R5). Another respondent commented on the structure and culture of the organization as a result of limited focus on workforce education: "*The core themes are academic transfer and 2 year degrees. EVERYTHING is designed and organized around them [including] 11 week quarters and seat time*" (R37).

Table 20

Coding Frequencies for Limited Workforce Focus Factors

Inductive Code	*n* = 33	Respondents	Frequency
WFFocusLimited		12	34
TransferPriority		6	8
VisionEDUnclear		4	4
ExternalFocusLimited		3	5
FundAltFocus─		3	4
WFEdDisrespect		3	3
WFEffortLimit		2	3
MissionBarriers		2	3

Note. The highlighted code includes frequency counts for all inductive codes in this theme. Only inductive codes with two or more respondents are included in this table.

Other themes. Several other themes with the percentage of respondents below 35%, yet above 10%, were also identified and are briefly represented below.

Communication barriers. Respondents (30%) identified communication barriers that impact the college's ability to be labor market responsive (CommunicationBarriers). All 14 comments within this theme focused on limited or nonexistent internal communication related to workforce development.

Limited engagement. Limited engagement that supports labor market responsiveness (EngagementLimited) was identified by 27% of respondents as a hindrance to labor market responsiveness. A few stated there is no effort to engage new partners (EngageNewPartner) and many noted the challenges with maintaining relationships with limited human resources.

Entrepreneurial limits. A lack of support for entrepreneurial efforts was noted by 21% of the respondents. As one respondent noted, "*entrepreneurial approaches to program development or delivery are not considered appropriate for mainstream conversations*" (R37). Several identified a lack of innovation (InnovationLimited) as a

specific hindrance and a couple commented on perceived limitations for risk-taking

(RiskLimited), even a "*punitive response to risk-taking*" (R32).

Marketing limits. Several respondents (18%) felt that marketing efforts do not

support workforce education (MarketingLimits). Primarily, they refer to a small scope or

limited marketing efforts (MarketingEffortLimit) or inadequate funds for marketing

(MarketingFunds).

Location. Several respondents (18%) also felt that the location of their college had

an impact on their ability to be labor market responsive (LocationLimit). Some felt that

the rural location of their college (Rural) hindered their abilities and others felt the

diversity of their location (LMDiverse) hindered their abilities. One respondent speaking

for rural colleges stated, "*the population base is small in our service district and the local*

jobs market is limited so it is difficult to justify starting new programs that quickly fill a

limited demand" (R17). While others spoke of "*the complexity of the overall economic*

market within [their] service areas" (R8).

Alignment. Some respondents (12%) felt there is limited focus on alignment

between the college and economic development (AlignmentFocusLimited). Instead of

developing programs based on labor market information, "*the impetus for developing a*

program comes from the inside. Then trying to get the data to support the interest and

gather people to serve on an advisory committee happens" (R11). And in many cases,

"*the focus of grants and funding opportunities is often to find the dollars first and then*

create the program.   It's not focused on our strengths or opportunities and needs" (R25).

Competition. A number of respondents (12%) also noted that competition for

workforce development roles (Competition) hinders the college's ability to be labor

market responsive. This can be competition with other community colleges (CompeteColleges) or other training providers (CompeteProviders). In addition to competition to fill the workforce development role, one respondent also noted that "competing for limited resources can hinder progress" (R33).

Enhancing and hindering factor patterns. Several related themes were identified for both the enhancing and hindering factors of labor market responsiveness. As Table 21 presents, within the top six themes for each factor, it is evident there are five primary patterns: resources, leadership, a workforce focus, organizational factors, and external engagement. Adequate resources was the strongest theme for both those acknowledging the positive impact the existence of resources had and the negative impact the absence of resource had on the colleges ability to tend to workforce development. The remaining four patterns had varying degrees of frequency for each theme, but still represent primary areas of focus for the respondents.

Table 21

Top Themes for Enhancing and Hindering Factors

Top Enhancing Factor Themes	Top Hindering Factor Themes
*Resources	*ResourceLimits
*Leadership	*OrganizationBarriers
*WFFocus	*LeaderLimits
*Engagement	*WFFocusLimited
*Organization	CommunicationBarriers
AlignmentFocus	*EngagementLimited
AdvisoryBodies	EntrepreneurialBarriers
Partnership Promoters	LocationLimits
Experience	MarketingLimits
Entrepreneurial	AlignmentFocusLimited
	Competition

Note. * = Identifies themes that are represented for both enhancing and hindering factors. Themes for each factor are listed in order of dominance.

In addition to the similarity in themes, there are numerous similarities in the inductive codes established by respondent's comments. Figures J.1 through J.5 in Appendix J present a visual of these similarities.

Summary

This chapter presented the quantitative and qualitative findings of this study as collected from workforce education administrators through the CCLMR+ survey. This instrument was a combination of the CCLMR survey, which was administered to identify the degree to which Washington State community colleges are perceived to be labor market responsive, and the additional open-ended questions utilized to gather further insight concerning factors that may hinder or enhance responsiveness. Workforce education administrators perceive Washington State community colleges to be labor market responsive to a degree, but not at a level identified as almost always or completely and some perceived characteristics to be nonexistent. The two dimensions of labor market responsiveness that are demonstrated higher than the other five are *leadership and governance* and *organizational culture*. The dimension perceived to be the least displayed is *organizational structure*, which lessens the impact of the *leadership and governance* dimension.

In addition, several themes emerged from the workforce education administrators' responses to the open-ended questions for both enhancing and hindering factors of labor market responsiveness. An analysis of the strongest themes each set of factors produced five patterns that workforce education administrators perceive to most impact the colleges ability to be labor market responsive. These factors are (a) resources, (b)

leadership, (c) a workforce focus, (d) organizational factors, and (e) external engagement.

These findings will be further analyzed and conclusions presented in the final chapter.

CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This concluding chapter provides an overview of this study's purpose, research questions, research methods, population and sample. The major findings and conclusions of this study will be discussed. Implications for action and suggestions for further research will also be presented. Concluding remarks and reflections from this study will be also shared.

Purpose and Research Questions

The purpose of this study was to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive as measured by the seven dimensions of the CCLMR assessment (leadership and governance, organizational structure and staffing, organizational culture, resources and funding, information and data, relationship-building, and partnerships). A secondary purpose of this study was to explore the factors that hinder or enhance the seven dimensions of a community college's labor market responsiveness. To this end, the following research questions guided this study:

1. To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's seven dimensions of labor market responsiveness?

   a) leadership and governance

   b) organizational structure and staffing

c) organizational culture

d) resources and funding

e) information and data

f) relationship-building

g) partnerships

2. What factors hinder or enhance the seven dimensions of a community
   college's labor market responsiveness as perceived by workforce education
   administrators?

Research Methods

The methods employed for this study followed an explanatory design, in which descriptive data was gathered first and qualitative data was gathered to further explain the quantitative results. A survey instrument was used to collect quantitative data in the form of Likert scale responses and qualitative data in the form of open-ended questions. The Likert scales were developed by the U.S. Department of Education as a result of the CCLMR initiative findings. The quantitative data collected from these Likert scales described the degree to which community and technical colleges are responsive to the labor market in Washington State. The addition of open-ended questions allowed qualitative data to be gathered to further explain factors that workforce education administrators perceive to impact the colleges' ability to be labor market responsive. Surveys were built with Survey Monkey software and accessed by participants through a website link delivered by email.

Population and Sample

The population for this study was Washington State community and technical college administrators. The Washington system includes 34 community and technical colleges with over 300 administrators of varying titles and areas of responsibility. Workforce education administrators were selected as the sample for this study as they are directly responsible for workforce development activities of their colleges. Participation in this study was voluntary and invitations were sent through the system's Workforce Education Council email distribution list representing workforce education administrators from all colleges in the system. This resulted in the voluntary participation of 39 workforce education administrators.

Major Findings

A summary of major findings from the data analysis in Chapter IV are presented in the following sections. Findings are organized by research question.

RQ 1.a – Leadership and Governance

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's leadership and governance dimension of labor market responsiveness?

The CCLMR initiative findings identified college *leadership and governance* as the most impactful factor influencing a community college's ability to be labor market responsive (MacAllum et al., 2004a). The discourse concerning the community college's role in workforce development also emphasized the dynamic skills and abilities necessary

in leadership to increase a college's responsiveness to the labor market (Alfred, 2012; American Association of Community Colleges, 2005, 2012; Amey, 2013; Boggs, 2012; Eddy, 2012; González, 2012; Harpine, 2013; Hawkins, 2009; Hentschke & Caldwell, 2005; Hillman & Orians, 2013; Hines, 2011; Kress, 2012; Lebesch, 2012; Leigh & Gill, 2009; Mars & Ginter, 2012; Meier, 2013; Mendoza, 2012; Rubenzahl, 2014; Treat & Hagedorn, 2013). Fortunately, Washington State workforce education administrators believe this to be one of the two strongest dimensions of labor market responsiveness that their community and technical colleges display. Only 2% feel leadership and governance characteristics are nonexistent, while 67% believe they are demonstrated almost always or completely. The most uncertainty within this dimension was whether workforce education was included within the college's mission statement. There was also concern that leadership may not be ensuring that labor market information is shared throughout the institution. However, workforce education administrators are certain that their college leaders are visible within the community.

RQ 1.b – Organizational Structure and Staffing

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's <u>organizational structure and staffing</u> dimension of labor market responsiveness?

The dimension of *organizational structure and staffing* was determined to be essential for labor market responsiveness and, if not adequately supporting labor market responsiveness, would actually limit the impact of positive leadership and governance

116

characteristics (MacAllum et al., 2004a). Specifically, organizational structure and staffing must represent equality between workforce and academic education, provide adequate staffing for the workforce mission, bridge credit and non-credit programming, and consolidate workforce services (MacAllum et al., 2004a). Workforce education administrators perceive community and technical colleges in Washington State to display characteristics of organizational structure and staffing the least out of any of the dimensions of labor market responsiveness. While the majority (53%) perceive it to be displayed somewhat (23%) or slightly (30%), 15% believe it to be a nonexistent characteristic. Scholarly discourse emphasizes the role of workforce education in today's community colleges (Boggs, 2010; Kolesnikova, 2010; Leigh & Gill, 2007; Mars, 2013; Treat & Hagedorn, 2013), yet also recognizes the continued focus on academic transfer (Kolesnikova, 2010). Workforce education administrators do not perceive their college's organizational charts and staffing structures to reflect a commitment to labor market responsive activities and programs. Almost 60% feel the organizational charts and staffing structures do not support credit and noncredit programming equally. Overall, the dimension of organizational structure and staffing is not a strong attribute for community and technical colleges in Washington State.

RQ 1.c – Organizational Culture

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's <u>organizational culture</u> dimension of labor market responsiveness?

Entrepreneurialism, alignment with community, and involvement with business and industry are *organizational culture* characteristics that define the third dimension of labor market responsiveness presented by the CCLMR initiative (MacAllum et al., 2004a). Workforce education administrators believe the dimension of organizational culture to be the other strongest dimension, along with leadership and governance, displayed by community and technical colleges in Washington State. The majority (61%) feels this dimension is displayed almost always or completely. Large majorities of workforce education administrators perceive community and technical colleges to display alignment with community (67%) and collaboration with business and industry (74%) almost always or completely. A smaller majority (59%) feel entrepreneurial characteristics are present almost always or completely. The need for and increasing existence of entrepreneurial characteristics in community colleges is recognized in the literature (American Association of Community Colleges, 2005; Goodnow, 2015; Hentschke & Caldwell, 2005; Kumar, 2013; Lassiter, 2013; Levin, 2005; Mars & Ginter, 2012; Mars & Metcalf, 2009a; Park, 2012), although some fear it is an erosion of the traditional academic culture (Couturier, 2005; Townsend, 2009).

RQ 1.d – Resources and Funding

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's resources and funding *dimension of labor market responsiveness?*

The fourth dimension of labor market responsiveness identified by the CCLMR initiative findings was *resources and funding*, most specifically the ability to access alternative funding streams, generate new resources, share fund raising responsibilities, effectively allocate to workforce education and maintain adequate facilities (MacAllum et al., 2004a). Workforce education discourse highlights challenges around declining resources dedicated to community college workforce education (T. H. Bers & Head, 2014; Boggs, 2011; Dowd & Shieh, 2014; Katsinas et al., 2012, 2014; Organization for Economic Cooperation and Development, 2012). In this environment, many scholars argue for the need to seek and diversify resources to support workforce education (Alfred, 2012; American Association of Community Colleges, 2005, 2012; Boggs, 2011; Dowd & Shieh, 2014; Drummer & Marshburn, 2014; Hentschke & Caldwell, 2005; Lassiter, 2013; Mars & Metcalf, 2009b; Thornton & Brattebo, 2009; Woodland & Parsons, 2013). Although there is a sense that resources for workforce development are available to community and technical colleges, workforce education administrators do not believe there are adequate levels of dedicated resources in Washington State. A majority (61%) believe adequate resources and funding are available only somewhat, slightly or not at all. Of most concern is a lack of human resources necessary for securing workforce development resources.

RQ 1.e – Information and Data

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's <u>information and data</u> dimension of labor market responsiveness?

The CCLMR initiative findings identified the importance of *information and data* use for labor market responsive colleges (MacAllum et al., 2004a). Current scholarly discourse also emphasizes the need for community colleges to understand their local labor market needs (American Association of Community Colleges, 2014; González, 2012; Imperatore, 2014; Kress, 2012; Lebesch, 2012). Yet, there is also an acknowledgement of the many challenges community colleges have in accessing and utilizing labor market information and data (Altstadt, 2011; Cleary & Van Noy, 2014; The Aspen Institute, 2014). The overall perception of the use of information and data by community and technical colleges in Washington is that it exists to some degree, but is rarely completely demonstrated (8%) and in some cases is nonexistent (5%). There is a stronger perception by many workforce education administrators that data driven decision making is rarely demonstrated or nonexistent. Data driven decision making is greatly recognized as a necessary characteristic of labor market responsive community colleges (American Association of Community Colleges, 2012; Imperatore, 2014; Lebesch, 2012; Manning, 2011; Morest, 2009; Prince, 2012; The Aspen Institute, 2014). Within this dimension it is also essential to conduct program reviews to ensure alignment with the labor market (ACT, 2012; T. Bers, 2011; Carnevale et al., 2013; Dar, 2013; MacAllum et al., 2004a; The Aspen Institute, 2014). Again, this is not strongly perceived to be a consistently demonstrated characteristic within the Washington community and technical college system. Although the overall perception for this dimension is low, workforce education administrators felt the strongest characteristic displayed was the presence and engagement of their leadership in the community to collect information. Scholarly discourse also emphasizes the importance of information gathered directly from personal

contacts (Altstadt, 2011; Brown, 2015; Imperatore, 2014; MacAllum et al., 2004a; The Aspen Institute, 2014).

RQ 1.f – Relationship Building

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's <u>relationship building</u> *dimension of labor market responsiveness?*

An understanding of the local labor market requires ongoing *relationship building* and maintenance by community colleges (MacAllum et al., 2004a). Numerous benefits of community college relationships with economic development partners are acknowledged in the literature (American Association of Community Colleges, 2005; Boggs, 2011; Cleary & Van Noy, 2014; Jacobs, 2014; Kress, 2012; MacAllum et al., 2004a; Washington Workforce Training and Education Coordinating Board, 2008). The majority of workforce education administrators felt community and technical colleges somewhat (33%) or almost always (34%) display relationship building characteristics. They believe their presidents and trustees communicate a labor market responsive mission and develop external relationships. However, the greatest disparity in the perceptions of workforce education administrators was concerning whether relationship building was recognized as a responsibility of all employees. Yet, scholars contend it is critical that this responsibility extend beyond the president and top-level administration (Amey, 2010; Jacobs, 2014; MacAllum et al., 2004a; Organization for Economic Cooperation and Development, 2012).

RQ 1.g - Partnerships

To what degree do workforce education administrators of Washington State community and technical colleges perceive their institutions to be labor market responsive as measured by the Community College Labor Market Responsiveness (CCLMR) assessment's <u>partnerships</u> *dimension of labor market responsiveness?*

Findings from the CCLMR initiative and the literature review identify *partnerships* with business, industry and economic development entities as unavoidable if community colleges are to be labor market responsive (American Association of Community Colleges, 2014; Dar, 2013; Goodnow, 2015; MacAllum et al., 2004a; Mourshed et al., 2012; National Governors Association, 2013; Soares, 2010). However, developing and maintaining partnerships is a complex and labor-intensive endeavor and colleges must be willing to commit resources for their success (Amey et al., 2010; Eddy, 2010). Overall, characteristics of the partnership dimension were perceived to be demonstrated to some degree, though only 11% felt this dimension was met completely. Workforce education administrators predominantly believe they are engaged in employer partnership somewhat or almost always. Scholars also note that partnerships are created and strengthened by entrepreneurial actions (Amey, 2010; Eddy, 2010; MacAllum et al., 2004a). Though, the majority of workforce education administrators do not believe entrepreneurial characteristics are supported, nor are staff encouraged or rewarded for entrepreneurial activities.

RQ 2 – Hindering and Enhancing Factors

What factors hinder or enhance the seven dimensions of a community college's labor market responsiveness as perceived by workforce education administrators?

Workforce education administrator responses generated five patterns of hindering and enhancing factors impacting the labor market responsiveness of community and technical colleges in Washington State: resources, leadership, a workforce focus, organizational factors and external engagement.

Resources. The most reoccurring factor perceived by workforce education administrators to be impacting a college's ability to be labor market responsive was whether or not it had access to adequate resources for workforce development. The CCLMR dimensions related to this pattern are *resources and funding* and *information and data*, however, workforce education administrators identified resources as including human resources, financial resources and information resources. In addition, access to financial and information resources were identified as dependent on human resources.

In terms of financial resources, the ability to dedicate human resources to grant writing and the receipt of grant funding was the most referenced source of alternative funding for colleges. The literature highlights many more sources of alternative funding streams, including business and industry, in-kind donations, self-support programming, contract training, and private donors (MacAllum et al., 2004a), but not much more than grants were recognized as possibilities by workforce education administrators. Yet, many colleges do not have dedicated grant writers (Lorenzo, 2013). Some did highlight the impact of college foundation resource acquisition and contributions to workforce education, which is noted by scholars as a potential resource support as well (Drummer & Marshburn, 2014; MacAllum et al., 2004a). Workforce education administrators emphasized the high costs associated with workforce development, including curriculum development and equipment purchases.

Workforce education administrators also acknowledge the impact of access to information and data. Literary discourse greatly emphasizes the many obstacles community colleges have to access local labor market information (Altstadt, 2011; Boggs, 2011; Bradley, 2011; Cleary & Van Noy, 2014; González, 2012; Lebesch, 2012; The Aspen Institute, 2014). Those that feel they have access to local labor market data reveled in the increased data-driven decision making it allowed. There is much discussion by scholars about the need for community colleges to increase the use of data-driven decision making (American Association of Community Colleges, 2012; Imperatore, 2014; Lebesch, 2012; Manning, 2011; Morest, 2009; Prince, 2012; The Aspen Institute, 2014). Those that feel they lack access to local labor market data are concerned about the impact this has on their ability to be responsive to changes, and scholars agree (American Association of Community Colleges, 2014; Imperatore, 2014; Kasper, 2009). The existence, use and staffing level of institutional research departments was also noted as impacting a college's labor market responsiveness. And to a small degree there is concern that workforce education and the colleges role in workforce development is not understood by other college employees and this lack of knowledge creates barriers to being responsive.

When addressing limited resources, workforce education administrators most commonly refer to the need for more human resources to adequately manage labor market responsive activities. The amount of time it takes to foster external relationships, develop new programs and secure alternate funding sources is considered a barrier to responsiveness with limited staffing. Workforce education administrators show a desire

to be labor market responsive, but feel limited staffing just doesn't allow them to do what is necessary.

Leadership. Workforce education administrators also perceive the leadership of their colleges to have a strong impact on their ability to be labor market responsive (MacAllum et al., 2004a). Most specifically, the level of commitment to and engagement in workforce development by leadership is a key factor and if it is directed by the president it is even more impactful. This pattern is directly related to the CCLMR dimension of *leadership and governance*. Leadership's empowerment of staff to carry out workforce development activities was also noted as an enhancing factor, including ensuring they are informed about the local labor market. Scholars go further to state it is the leader's responsibility to understand the needs of the local labor market (González, 2012; Kress, 2012; Lebesch, 2012). And they also support the need to empower all staff to be involved in labor market responsiveness activities (Hentschke & Caldwell, 2005; MacAllum et al., 2004a).

In addition, the effectiveness of leadership was also identified by workforce education administrators. Positive traits highlighted in responses included being proactive and visionary, while negative traits expressed included being reactionary and lacking a clear message or communication skills. Scholars also identified the need for leaders to be visionary (Alfred, 2012; Hawkins, 2009; Kouzes & Posner, 2012; MacAllum et al., 2004a) and proactive (Connors & Smith, 2011; Hentschke & Caldwell, 2005; MacAllum et al., 2004a). There was also concern about high levels of turnover of college leadership and the difficulty in finding leaders to fill the very complex role required in workforce development. This complex role is also referenced in the literature

as requiring the ability to navigate increased demands with ever-limiting resources (Alfred, 2012; Amey, 2013).

Workforce focus. The degree of priority given to workforce education and development is deemed by workforce education administrators as a factor that can hinder or enhance their ability to be labor market responsive. Elements of this pattern exist within the dimensions of *leadership and governance*, *organizational culture*, and *organizational structure and staffing*, however workforce education administrators gave greater emphasis to the specific focus on and understanding of workforce development and education than any of the CCLMR dimensions provided. They perceived a great impact by the inclusion of workforce education in the college's mission statement. Mission priority is more than just a use of the term 'workforce development,' it is a commitment to and understanding of the role of the college in economic development (American Association of Community Colleges, 2012; Hillman & Orians, 2013; Rubenzahl, 2014). It is also essential that the workforce development mission is aligned with the need to secure alternative funding and resources (Alfred, 2012; American Association of Community Colleges, 2012; Hines, 2011; Lassiter, 2013; Meier, 2013; Nielsen, 1994). Workforce education administrators acknowledged the positive impact leadership's approval and support for securing alternative funding sources for workforce education have on their capacity to be responsive.

Yet, they also commented that the level of understanding and support from colleagues about the need for workforce education to be flexible and nimble created or removed barriers to responsiveness. As a hindering factor, many noted the perception that workforce education was a lower priority than academic transfer programs, even to

the degree that, in a few cases, a level of disrespect existed for programs, staff, faculty and students in workforce education. Scholarly discourse notes this controversy of equality between workforce and academic programming (Bailey & Belfield, 2013) and the perceived priority of the latter (Kolesnikova, 2010), even though there is strong recognition of the workforce development role of the community college (Boggs, 2010; Kolesnikova, 2010; Leigh & Gill, 2007; Mars, 2013; Treat & Hagedorn, 2013).

Organizational factors. There were many references by workforce education administrators to organizational factors that hinder or enhance the college's ability to be labor market responsive. This pattern includes characteristics found in both the *organizational culture* and *organizational structure and staffing* dimensions of the CCLMR initiative, yet they are combined here because workforce education administrators did not differentiate between the cultural and structural aspects of factors. The most acknowledged enhancing factor was collaboration between credit and noncredit programming, which was also a noted hindering factor when nonexistent. Integration of credit and noncredit is a rare occurrence with community colleges, but when there is collaboration, labor market responsiveness increased as a result of increased flexibility in program development and leveraged resources (Jacobs, 2014; MacAllum et al., 2004a). Support for noncredit programming was also identified as a contributing factor. Both workforce education administrators and the literature identify a perception, in some cases, that noncredit programming is a competitor with credit programming (MacAllum et al., 2004a; Mendoza, 2012).

Departments dedicated to business engagement were also presented as examples of the colleges' focus on workforce development. The CCLMR initiative found, and

literary discourse supports, that consolidated workforce services was a characteristic of the most labor market responsive colleges (ACT, 2012; Lorenzo, 2013; MacAllum et al., 2004a). The existences of career services, institutional research departments and cross functional teams were also positively noted, although the existence and level of development of these resources is not standard across the system.

An area of concern expressed by workforce education administrators was the dominant impact faculty factors can have on workforce education programming decisions, instead of labor market needs. Workforce education program development requires faculty support (Goodnow, 2015) and accessing faculty expertise in alignment with new programming needs can be hindered by structural barriers, such as tenure or union rules (Mellow & Heelan, 2015).

External engagement. The final pattern for hindering and enhancing factors identified by workforce education administrators is the involvement of the college in economic development activities and relationships. This pattern predominantly correlates with the CCLMR dimension of *relationship building* and *partnerships*. Again, human resources were noted as contributing to the college's ability to develop and maintain external relationships due to the extensive time and effort required. In some cases, seeking new partnerships is not even supported by college administration due to limited capacity to support them. The literature acknowledges the challenges associated with building and maintaining relationships (Amey et al., 2010; Eddy, 2010; Mellow & Heelan, 2015). However, overwhelmingly workforce education administrators commented on the high levels of external engagement that is supported by their colleges and the critical impact it has on being labor market responsive. Business and industry

was the most commonly noted partner type engaged with by colleges. Workforce education administrators see the benefit of engagement in their local communities as increasing information gathering, promoting offerings and developing partnerships. Scholarly discourse supports the critical need to gather information about the local labor market directly from personal contacts (Imperatore, 2014; MacAllum et al., 2004a; The Aspen Institute, 2014) as well as the benefits of acquiring resources and an understanding of the local labor market (Boggs, 2011; Brand, 2014; Kress, 2012; MacAllum et al., 2004a; Nickoli, 2013; Soares, 2010).

Other themes. In addition to the five patterns shared by both hindering and enhancing factors, there were several less prominent patterns and themes. Two additional patterns included: alignment with economic development, and entrepreneurial characteristics. Alignment with economic development strategies and activities within the college's community was perceived to emphasize the role of the college and its workforce development priorities. Key terms associated with entrepreneurial characteristics, such as innovation, risk-taking and creativity, were mentioned by a few workforce education administrators.

Four additional hindering themes included: (a) communication barriers, (b) limits of location, (c) marketing limits, and (d) competition. Responses referencing communication barriers were focused on the limited or nonexistent internal communication related to workforce development. Location limits included both limitations of rural economies and larger and more diverse labor markets. Marketing limits were identified as the small scope of or limited efforts of marketing focused on workforce education. Types of competition hindering labor market responsiveness

included competition with other community and technical colleges, with other training providers, and for limited resources.

Three additional enhancing themes included: (a) advisory bodies, (b) partnership promoters, and (c) experience. The business and industry membership of advisory bodies are recognized for gathering local labor market information and guiding program and curriculum development. Partnership promoters were predominantly identified as actions of recognition of partners, as well as co-location, work-based learning activities and the significant role community and technical colleges play in their communities. Experience of leadership and administrators with workforce education, the local economy and Washington State were also noted factors workforce education administrators felt enhanced their college's labor market responsiveness.

Unexpected Findings

Entrepreneurial characteristics of labor market responsive colleges were a robust theme throughout the review of literature, yet it was referenced by very few workforce education administrators as hindering or enhancing factors of responsiveness. The quantitative findings did identify a perception that staff are rarely or not encouraged or rewarded for entrepreneurial activities. Yet, when responding openly about the factors that impact their ability to be responsive, only five workforce education administrators' responses reflected characteristics of entrepreneurialism. In the context of community colleges, entrepreneurialism can be defined as combining risk-taking, innovation and opportunity (Mars & Metcalf, 2009b). These characteristics are foundational to the new Workforce *Innovation* and *Opportunity* Act within which community and technical colleges are workforce development partners, so it is essential that colleges meet the

130

challenge of responsiveness through innovation and opportunities. When directly asked if the college is characterized by flexibility, innovation, collaboration, and entrepreneurship, 59% stated almost always or completely, but their qualitative responses did not include language in reference to this. When directly asked if the college encourages and rewards its staff for entrepreneurial activities, 10% stated this is not occurring at all and 64% believe it is only slightly or somewhat occurring. This lack of support for entrepreneurial activities could be a reason why much needed alternative funding endeavors are limited to seeking grant funding. Innovation stems from the people in the institution (O'Banion et al., 2010), so if they are not supported in their entrepreneurial efforts the college's responsiveness is hindered. A culture of responsiveness requires staff to possess and actively display "characteristics like risk-taking, entrepreneurship, innovation, flexibility, and empowerment" (MacAllum et al., 2004c, p. 22). In literary discourse, those that believe entrepreneurial characteristics are a necessary and inevitable evolution in workforce education activities at community and technical colleges far outweigh those that disagree. Therefore, it was unexpected to receive so little acknowledgement of this trend from practitioners.

Conclusions

Using the major findings, the researcher drew relevant conclusions concerning the labor market responsiveness of community and technical colleges in Washington State. Conclusions are presented by integrating the qualitative, quantitative, and literature review findings.

Conclusion 1 – Degree of Labor Market Responsiveness

There is great debate within scholarly discourse concerning the ability of community colleges to be labor market responsive, but many believe they can be if they make strategic efforts to increase characteristics of responsiveness (Alfred, 2012; Bailey & Jacobs, 2009; Bradley, 2012; MacAllum et al., 2004a; Richburg-Hayes et al., 2013; Riggs, 2009; Romano & Dellow, 2009). Only 16% of workforce education administrators perceive their colleges to be completely labor market responsive, while 17% believe their intuitions to only slightly demonstrate responsiveness and 5% feel it is nonexistent. The majority of the perceptions of community college labor market responsiveness are equally split between 'somewhat' and 'almost always'. Therefore, it is concluded that Washington State community and technical colleges demonstrate a moderate to good level of labor market responsive as a system, though degrees of responsiveness vary greatly among individual institutions and some have much more need for improvement than others to reach the highest level of labor market responsiveness.

Conclusion 2 – Workforce Development Resources

Community colleges are challenged with accessing adequate resources to support workforce development efforts (Altstadt, 2011; Cleary & Van Noy, 2014; Katsinas et al., 2012; MacAllum et al., 2004a). Workforce education administrators referenced the impacts of resources more than double that of any other references, both as hindering and enhancing factors to labor market responsiveness. Their responses defined resources as including financial, human, and information resources. In order to be more labor market responsive in an environment of declining state funding, community colleges must access alternative funding sources (American Association of Community Colleges, 2012;

132

Lassiter, 2013; MacAllum et al., 2004c; The Aspen Institute, 2014; Thornton & Brattebo, 2009) and ensure resource allocations support workforce development (ACT, 2012; MacAllum et al., 2004c). The largest portion of workforce education administrators (36%) believes colleges only somewhat have the resources and funding necessary to be labor market responsive. Within this perception is a concern about insufficient levels of human resources. Community colleges are also challenged with accessing information resources that will help them understand their local labor market needs (Altstadt, 2011; Cleary & Van Noy, 2014; The Aspen Institute, 2014). The largest group of workforce education administrators (38%) also noted access to information and data as only occurring somewhat. Therefore, it is concluded that resources dedicated to workforce development are the most critical factor impacting the labor market responsiveness of community and technical colleges in Washington State.

Conclusion 3 – Leadership and Organizational Structures

The CCLMR initiative reported leadership as the most critical factor of a community college's labor market responsiveness (MacAllum et al., 2004a), and the literature supports this need for supportive and effective leadership (Alfred, 2012; American Association of Community Colleges, 2005; Amey, 2013; Mars & Ginter, 2012). The CCLMR initiative also reported the impact of leadership to be limited when an appropriate organizational structure that supports workforce development is not in place (MacAllum et al., 2004a). Workforce education administrators perceive *leadership and governance* to be the strongest dimensions of labor market responsiveness displayed by Washington State community and technical colleges. However, they also perceive *organizational structure and staffing* as the weakest dimension displayed by community

133

and technical colleges. Also strengthening this dynamic, workforce education administrator responses identified leadership as the second strongest theme for enhancing factors and organizational barriers as the second strongest theme for hindering factors. Therefore, it is concluded that Washington State community and technical college leadership enhances labor market responsiveness, yet inadequate organizational structures that do not support workforce development minimize the impact of this supportive and effective leadership.

Conclusion 4 – External Engagement

Relationship building, although a necessary task of being labor market responsive, is not an easy endeavor and community colleges are challenged by the number and level of ongoing commitments necessary (MacAllum et al., 2004a; Mellow & Heelan, 2015). And the development of partnerships is even more complex and labor-intensive (Amey et al., 2010; Eddy, 2010). The majority of workforce education administrators (67%) perceive both the dimensions of *relationship building* and *partnerships* to be displayed by community and technical colleges almost always or at least somewhat. However, 34% perceive *relationship building* to be almost always displayed, while only 29% perceive *partnerships* to be. Engagement with external relationships and activities was also identified as one of the strongest patterns from their open-ended responses. Yet, their responses also referenced the challenges with developing and maintaining partnership with limited human resources. Therefore, it is concluded that community and technical colleges in Washington State are committed to building and maintaining external relationships, yet inadequate resources reduce their ability to engage in all partnership opportunities.

Conclusion 5 – Entrepreneurial Characteristics

Entrepreneurship in the context of higher education is defined by Mars and Metcalf (2009b) "as those activities that combine risk, innovation, and opportunity, particularly in times of uncertain resources" (p. 3). The CCLMR initiative found entrepreneurial characteristics in the most labor market responsive community colleges (MacAllum et al., 2004a). The majority (74%) of workforce education administrators believe entrepreneurial activities are not encouraged or supported at an adequate level, and 10% of that majority do not believe it is at all. In addition, very few workforce education administrators referenced entrepreneurialism, or characteristics of, when identifying hindering or enhancing factors impacting their ability to be labor market responsive. However, scholarly discourse presents the inevitable need for community college entrepreneurialism to navigate resource-limited environments (American Association of Community Colleges, 2005; Dowd & Shieh, 2014; Hentschke & Caldwell, 2005; Woodland & Parsons, 2013) and effectively respond to labor market needs (Lassiter, 2013; Levin, 2005; Mars & Ginter, 2012; Mars & Metcalf, 2009a; Noy & Jacobs, 2009; Park, 2012). Therefore, it is concluded that labor market responsiveness of community and technical colleges can be enhanced by employing and supporting entrepreneurial characteristics.

Implications for Action

This study identified several implications for policy makers, researchers and practitioners. In alignment with the conclusions of this study, the researcher proposes the following implications:

Increasing Labor Market Responsiveness

To increase labor market responsiveness, college administrators can utilize the Community College Labor Market Responsiveness assessment to analyze their own degree of responsiveness and identify specific areas for improvement. The results of this assessment should be used to guide strategic planning efforts, especially to develop an organizational structure that supports workforce development.

Adequate Resources

Community and technical colleges in Washington State need resources dedicated to workforce development to be responsive to the labor market. Researchers should further contribute by investigating the costs and return on investment associated with workforce development for community and technical colleges. This in turn, could assist in informing policy makers about specific resource needs and state allocations could be adjusted or alternate resources could be made available. Policy makers should also consider the impact of funding non-credit workforce education as a means of increasing the community and technical colleges' ability to be responsive and meet labor market needs. Yet, foundationally, college administrators need to dedicate adequate staffing for workforce development activities in alignment with the mission of their institutions.

Community and technical colleges in Washington State also need better access to longitudinal and real-time labor market data. Policy makers need to focus on enacting state-level support for and access to state and regional labor market data. College administrators should continue to develop the resources of their Institutional Research departments. Workforce education practitioners need to better utilize labor market information in program development and review and leadership needs to support and

136

model a culture of data-driven decision making for programming decisions. Researchers could further assist community and technical colleges by identifying the most beneficial labor market information tools and strategies for community and technical colleges in Washington State.

Leadership and Organizational Structure

Although leadership is strong, organizational structure and staffing of Washington State community and technical colleges needs to better reflect the college's role in workforce development. College leaders should review their organizational charts and ensure the arrangement and level of staffing reflects their workforce development mission. They must also ensure that workforce development activities are not conducted in isolation from the rest of the institution by facilitating continuous communication channels and inter-department collaboration. Researchers should also contribute to organizational change by studying the organizational structure characteristics of labor market responsive colleges.

External Engagement

Engagement in the external community is essential for a Washington State community and technical colleges to be labor market responsive, but engagement levels and partnership opportunities are limited as a result of inadequate human resources for workforce development. With limited resources, practitioners must develop strategic priorities for partnerships and communicate efforts throughout the institution in order to reduce duplication of efforts. Policy makers need to recognize the need for human resources in workforce development goes far beyond faculty and identify ways to

increase support for engagement in workforce development relationships within local communities.

Entrepreneurial Characteristics

Community college leaders need to support a culture of entrepreneurialism by recognizing and rewarding employees demonstrating characteristics of innovation, creativity, flexibility and risk-taking. Leaders should also identify ways to redesign organizational factors to allow for flexibility outside of the traditional academic structure. Researchers could also contribute in a shift from traditional academic culture to community college entrepreneurialism through further studies on the impacts of each model on labor market responsiveness. Practitioners need to embrace the benefits of entrepreneurial characteristics and utilize entrepreneurial staff to advance labor market responsiveness. Practitioners could also develop professional development training to introduce staff to entrepreneurial factors that enhance a community and technical college's labor market responsiveness.

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Recommendations for Further Research

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The limited scope of this study provides only one lens to view the labor market responsiveness of community and technical colleges. Based on the findings of this study, several recommendations for future research concerning the labor market responsiveness of community and technical colleges are presented below:

1. The population for this study was limited to college administrators. It is recommended that a comparative study of the perceptions of college administrators and economic development partners be employed.

2. The location of the colleges was not a variable for this study. Future research

should investigate differences between community colleges with rural and urban service areas to identify any impacts associated with location, size of the labor market or diversity of the local industries.

3. The findings of this study resulted solely from the perceptions of participants. Further descriptive data and correlational findings could be obtained by adding additional labor market responsiveness indicators, including the college's level of alternative funding revenue, number of contract trainings, number of external partnerships, or number of economic development relationship or activities, among other indicators.

4. The sample for this study did not distinguish between credit and noncredit program administrators. It is recommended that further studies include a comparison of the perceptions of credit and noncredit workforce education staff. Differing perceptions may be found that could increase the understanding of the role each type of programming plays in the college's labor market responsiveness.

5. This study was anonymous, so individual organizational structure characteristics for each college was not identified. Future research could identify the college's organizational structure inventory of labor market responsiveness enhancing factors and compare to their level of labor market responsiveness, including the existence of an intuitional research department, a department dedicated business engagement, career services, an equitable organizational chart, a grant writer, and sufficient workforce education staffing, among other variables.

6. This study was conducted during a post-recession period. Future studies could be conducted during a declining economy. This could produce varying perceptions of a college's labor market responsiveness when there are higher unemployment rates.

7. The sample for this study was limited to workforce education administrators. It may be beneficial for future research to gather non-workforce education college administrators' perceptions of the role of workforce education in order to identify misperceptions and potential barriers impacting labor market responsiveness.

8. Entrepreneurial characteristics were identified as a growing theme in the literature, but were not identified as a variable of this study. It is recommended that a future study be employed to specifically identify the degree to which community colleges display entrepreneurial characteristics within workforce development.

9. The critical importance of data-driven program reviews for alignment with labor market needs was expressed in the literature, but was not a variable of this study. Future research should further investigate the program review processes of community colleges and their impact on labor market responsiveness.

Concluding Remarks and Reflections

Community colleges have evolved away from their original purpose of exclusively providing the first two years of a four-year degree. They are now instrumental partners in our nation's economic vitality and have a pivotal role in

workforce development. It is, therefore, important for community and technical colleges to ensure factors that support labor market responsiveness are existent and strong within their institutions and that all employees support workforce development efforts.

When discussing the intention of this study with practitioners, there was enthusiasm for sharing the great attributes of workforce education in our community and technical college system. However, when collecting survey responses it was challenging for them to take the time away from their complex schedules and workloads. This demonstrated time constraint aligned with and strengthened the study's findings concerning human resource needs and the dynamic nature of workforce education staff workloads. Workforce education has many moving and competing variables, so as a system and as individual colleges we need to better recognize their need to be flexible and responsive and create structures and policies that enhance their efforts.

Community and technical colleges in Washington State are experts in workforce development. Yet, there are many factors impacting their ability to quickly and effectively respond to opportunities to meet labor market needs. More often than not, they are perceived as moving too slow by business and industry and other economic development partners. They can, however, reach their full potential as a core workforce developer for the state if organizational structure barriers are reduced, resources are more adequately dedicated, and entrepreneurial activities are employed and supported.

Overall, there is a large variance in the perceptions of college labor market responsiveness in Washington State. Based on the findings of this study it is not completely evident why some colleges display more labor market responsiveness characteristics than others. It is my hope that future studies will be conducted to further

investigate factors that enhance a college's labor market responsiveness and findings will lead to a comprehensive shift in the way workforce education is perceived and supported by both policy makers and college leadership.

Fortunately, over a decade of experience in workforce development in the Washington community and technical college system provided me with a strong foundation for conducting this study. The numerous roles I performed as an instructor, student support staff, and administrator afforded me an extensive understanding of the inner workings of the community college. In addition, I had the opportunity to build external relationships through my role as a college liaison to numerous and various economic development partners. Through the process of conducting this study, I was obliged to reexamine my scope of understanding of the college's role in workforce development, the level of positive factors existing throughout the system and the similar challenges that are faced. In my current policy role for workforce education, I will utilize this new breadth and depth of understanding to guide actions in support of increased resources for and support of workforce education in Washington State.

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Synthesis Matrix

Author	Community College Responsiveness	Entrepreneurial Characteristics	Leadership & Governance	Org Structure & Staffing	Org Culture	Resources & Funding	Information & Data	Relationship Building	Partnerships
ACT, 2012	x			x		x	x		x
Alfred, 2012	x	x	x	x		x	x		
Altstadt, 2011	x						x		
American Association of Community Colleges, 2005		x	x		x	x	x	x	
American Association of Community Colleges, 2012		x	x	x	x	x	x	x	x
American Association of Community Colleges, 2014	x	x					x		x
Amey, 2010			x					x	x
Amey, 2013		x	x						
Amey, Eddy, & Campbell, 2010									x
Bailey & Belfield, 2013				x	x				
Barnett & Hughes, 2010									x
Basham & Mathur, 2010				x					
Bers & Head, 2014			x			x	x		
Bers, 2011							x		
Bly, 2014					x	x		x	
Boggs, 2010	x	x							
Boggs, 2011		x	x	x	x	x	x	x	x
Boggs, 2012	x		x						
Bradley, 2011	x						x		
Bradley, 2012	x								
Bragg, 2013				x					x
Brand, 2014									x
Brown, 2015			x				x	x	x
Business-Higher Education Forum, 2010	x						x	x	x
Carnevale, Smith & Strohl, 2013							x		
Carnevale, Smith & Strohl, 2013				x	x		x		
Cejda & Jolley, 2014		x	x	x	x				x
Cleary & Van Noy, 2014	x			x		x	x	x	
Connors & Smith, 2011			x		x				
Couturier, 2005	x								
Dar, 2013						x	x		x
Dorsey, 2012		x							x
Dowd & Shieh, 2014				x		x			

161

Drummer & Marshburn, 2014						x			
Eddy, 2010							x		x
Eddy, 2012			x						
Edwards, 2013									x
Ewell, 2010				x			x		
Fishman & Sullivan, 2013		x		x		x			
Gallup, 2014	x								x
Githens, Sauer, Crawford & Wilson, 2012	x								
Gonzalez, 2012							x		
Goodnow, 2015				x				x	x
Harpine, 2013	x	x	x	x	x				x
Hawkins, 2013			x						
Hentschke & Caldwell, 2005		x	x	x	x	x	x		x
Hillman & Orians, 2013	x		x						
Hines, 2011		x	x	x			x		x
Hoffman, 2013	x				x				x
Holzer, 2013				x			x		x
Howley, Chavis & Kester, 2013	x								
Imperatore, 2014							x		x
Jacobs, 2014				x	x			x	
Kanter, 2015									x
Kasper, 2009	x						x		
Katsinas, D'Amico & Friedel, 2012						x			
Katsinas, D'Amico & Friedel, 2014						x			
Kouzes & Posner, 2012		x	x		x		x	x	
Kress, 2012							x	x	
Kumar, 2013		x			x				
Lassiter, 2013		x				x			
Lebesch, 2012							x		
Leigh & Gill, 2007	x				x				
Leigh & Gill, 2009	x		x	x		x		x	
Levin, 2005		x	x		x				
Lorenzo, 2013				x		x			
MacAllum, Yoder & Poliakaff, 2004a	x	x	x	x	x	x	x	x	x
Manning, 2011							x		
Manning, 2013	x								
Mars & Ginter, 2012	x	x	x						
Mars & Metcalf, 2009a	x	x			x				
Mars & Metcalf, 2009b		x				x			
Mars, 2013				x			x		

McKernan, 2015	x							x
McNamara, 2012	x							
Meier, 2013			x					
Mellow & Heelan, 2015				x	x		x	x
Mellow & Katopes, 2009	x				x		x	
Mendoza, 2012			x	x				
Morest, 2009						x		
Mourshed, Farrell & Barton, 2012					x	x		x
Mullin, 2011	x				x			x
National Governor's Association, 2013	x	x				x		x
Nickoli, 2013		x					x	
Nielsen, 1994	x		x		x		x	x
Noy & Jacobs, 2009	x	x		x				
O'Banion, Weidner & Wilson, 2010	x	x		x				
Organization for Economic Cooperation and Development, 2012					x		x	x

Park, 2012		x				x		
Prince, 2012						x		
Rhodes, 2015		x			x	x		
Richburg-Hayes, Armijo & Merrill, 2013	x							x
Riggs, 2009	x			x				
Rubenzahl, 2014			x	x				
Shaffer, 2012	x							
Soares, 2010	x	x		x	x		x	x
Szelenyi & Goldberg, 2011					x		x	
The Aspen Institute, 2014					x	x		
The White House, 2009	x					x		x
The White House, 2009 (July 14)		x		x	x	x		x
Thornton & Brattebo, 2009		x	x		x			x
Treat & Hagedorn, 2013		x						
Washington Workforce Training and Education Coordinating Board, 2008					x	x	x	
Weidner, 2010		x		x				x

Wilson, 2014						x		
Woodland & Parsons, 2013	x	x	x	x	x			x
Wright, 2015	x							x

CCLMR+ Survey Instrument

Section 1: Survey Overview

Community College Labor Market Responsiveness + (CCLMR+) Survey

Survey Overview

This survey is adapted with permission from the U.S. Department of Education, Office of Vocational and Adult Education's, *The 21st-Century Community College: A Strategic Guide to Maximizing Labor Market Responsiveness*. Based on this research for the U.S. Department of Education, MacAllum, Yoder and Poliakaff (2004) defined community college labor market responsiveness as follows:

A labor-market-responsive community college delivers programs and services that align with and seek to anticipate the changing dynamics of the labor market it serves. These programs and services address the educational and workforce development needs of both the employers and students as part of the college's overall contribution to the social and economic vitality of its community.

In order to assess a community college's labor market responsiveness, this report identified the following seven dimensions of labor market responsiveness:

1. Leadership and Governance
2. Organizational Structure and Staffing
3. Organizational Culture
4. Resources and Funding
5. Information and Data
6. Relationship-Building
7. Partnerships

This survey is divided into seven sections that correspond to the seven dimensions of labor market responsiveness. At the beginning of each section, statements identifying characteristics of the dimension are listed and you will be asked to rate the statement in respect to your own college. At the end of each section, you will also be asked two open-ended questions related to the dimension. Please answer all questions to the best of your ability.

Section 2: Leadership and Governance

Community College Labor Market Responsiveness + (CCLMR+) Survey

Leadership and Governance

* In respect to your college's *leadership and governance* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
College leadership is shared among multiple people.	○	○	○	○	○
Labor market responsiveness is reflected in the college mission statement.	○	○	○	○	○
Leader, especially the board and president, are fully and publicly committed to a labor-market-responsive mission.	○	○	○	○	○
Leaders are actively involved in furthering that mission.	○	○	○	○	○
Leaders maintain a vision beyond the traditional service area.	○	○	○	○	○
Leaders portray the college as an economic development partner to the community.	○	○	○	○	○
College leaders are very visible in the community.	○	○	○	○	○
College leaders are well informed on economic and workforce trends.	○	○	○	○	○
Leaders convey local market information to the broader campus.	○	○	○	○	○
Leadership style is passionate, innovative, anticipatory, and entrepreneurial.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate the *leadership and governance* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *leadership and governance* characteristics identified in the statements above?

166

Section 3: Organizational Structure and Staffing

* In respect to your college's *organizational structure and staffing* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
The organizational chart and staffing structure of the community college reflect a commitment to labor-market-responsive services and programs.	○	○	○	○	○
The college's organizational chart and staffing structure reflect the equal importance of credit and noncredit programs.	○	○	○	○	○
Campus structure facilitates communication and access to the human and financial resources essential for labor-market-responsive activities.	○	○	○	○	○
Credit and noncredit programs and their faculties collaborate to develop and deliver career-oriented training.	○	○	○	○	○
Close working relationships between the credit and noncredit sides of the college enhance the college's ability to provide labor-market-responsive programs.	○	○	○	○	○
Human resources are deployed in the most efficient manner to meet labor-market-responsive goals.	○	○	○	○	○
Program development, outreach, and interaction are considered everyone's job.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *organizational structure and staffing* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *organizational structure and staffing* characteristics identified in the statements above?

167

Section 4: Organizational Culture

Community College Labor Market Responsiveness + (CCLMR+) Survey

Organizational Culture

* In respect to your college's *organizational culture,* select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
A strong belief system embraces labor market responsiveness as a core mission.	○	○	○	○	○
The college is characterized by flexibility, innovation, collaboration, and entrepreneurship.	○	○	○	○	○
The college has a motto or theme that focuses attention on the mission of workforce and economic development.	○	○	○	○	○
Leaders and staff are open to change, committed to serving students and employers, and respectful of workplace culture.	○	○	○	○	○
Workforce-development strategies reflect the cultures of the surrounding communities and specifically address local needs.	○	○	○	○	○
There is a willingness to work closely with representatives from business and industry in the design, development, and delivery of education and training.	○	○	○	○	○
College leaders, faculty, and staff share a common understanding of the proper balance of the college's multiple missions.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *organizational culture* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *organizational culture* characteristics identified in the statements above?

Section 5: Resources and Funding

* In respect to your college's *resources and funding* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
The college aggressively pursues non-state sources of income.	○	○	○	○	○
The widest possible range of funding streams has been explored.	○	○	○	○	○
The college is innovative in developing and embracing new methods to raise funds for high-demand programs.	○	○	○	○	○
The community college is creative in seeking new sources of income to finance workforce development.	○	○	○	○	○
College leadership is strategic in leveraging resources and in-kind donations to support and expand partnerships.	○	○	○	○	○
The college is successful in securing strong financial support from local sources.	○	○	○	○	○
Sufficient human resources are dedicated to obtaining resources that support responsive programming and services.	○	○	○	○	○
The college president, board members, and top administrators are personally invested in developing large-scale partnerships that fund responsive programs.	○	○	○	○	○
Discretionary resources are allocated equitably between academic and occupationally oriented programs.	○	○	○	○	○
Adequate resources are invested in the professional development of faculty and staff to enable them to effectively implement responsive programs.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *resource and funding* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *resource and funding* characteristics identified in the statements above?

169

Section 6: Information and Data

* In respect to your college's *information and data* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
The community college relies on local information-gathering and published data to drive strategic planning for its responsive programs and services.	○	○	○	○	○
The college has cultivated a network of well-positioned leaders in the community to provide information about local needs and trends.	○	○	○	○	○
College leaders and staff are well-informed about the needs of local business and industry and future economic trends.	○	○	○	○	○
The college evaluates the impact of its market-responsive programs and services.	○	○	○	○	○
The college assesses the value of labor-market-responsive programming and services and these assessments lead to programmatic change.	○	○	○	○	○
The college evaluates the satisfaction of local businesses, partners, students, and their employers.	○	○	○	○	○
Anticipatory thinking, based on solid information and data, pervades campus culture, informs outreach to partners, and shapes future vision.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *information and data* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *information and data* characteristics identified in the statements above?

Section 7: Relationship-Building

* In respect to your college's *relationship building* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
The college reaches out to students, businesses, and other organizations to gather information about general economic conditions and specific employer concerns.	○	○	○	○	○
The college develops relationships with a wide variety of local organizations that could strengthen its ability to be responsive.	○	○	○	○	○
Leaders and staff take an active and aggressive stance in reaching out to the community.	○	○	○	○	○
Relationship-building is recognized as everyone's job.	○	○	○	○	○
The trustees and president communicate the college's mission of labor market responsiveness in the public eye and in circles of influence.	○	○	○	○	○
The college seeks out new ways to market itself, regionally and nationally.	○	○	○	○	○
Marketing activities encourage others to approach the college as a partner.	○	○	○	○	○
Strategic relationship-building is recognized as the foundation for establishing strategic partnerships.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *relationship building* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *relationship building* characteristics identified in the statements above?

Section 8: Partnerships

Community College Labor Market Responsiveness + (CCLMR+) Survey

Partnerships

* In respect to your college's *partnership* characteristics, select the most accurate response to each statement.

	Not at all	Slightly	Somewhat	Almost always	Completely
The college is engaged in sustained, successful employer partnerships that are responsive to the local market.	○	○	○	○	○
The college has established strategic priorities for partnership-building with employers, aligned with the community's needs.	○	○	○	○	○
The partnerships in which your college takes part anticipate local economic development and growth.	○	○	○	○	○
The college has identified and partnered with the right mix of organizations.	○	○	○	○	○
The college partners with large employers and innovative industries.	○	○	○	○	○
The college encourages and rewards its staff for entrepreneurial activity.	○	○	○	○	○
Partnerships are assessed and maintained in proportion to the ability to leverage long-term outcomes and opportunities.	○	○	○	○	○

What factors *enhance* your college's ability to demonstrate *partnership* characteristics identified in the statements above?

What factors *hinder* your college's ability to demonstrate *partnership* characteristics identified in the statements above?

APPENDIX C

Washington State Community and Technical Colleges

1. Bates Technical College
2. Bellevue College
3. Bellingham Technical College
4. Big Bend Community College
5. Cascadia College
6. Centralia College
7. Clark College
8. Clover Park Technical College
9. Columbia Basin College
10. Edmonds Community College
11. Everett Community College
12. Grays Harbor College
13. Green River College
14. Highline College
15. Lake Washington Institute of Technology
16. Lower Columbia College
17. North Seattle College
18. Olympic College
19. Peninsula College
20. Pierce College Fort Steilacoom
21. Pierce College Puyallup
22. Renton Technical College
23. Seattle Central College
24. Shoreline Community College
25. Skagit Valley College
26. South Puget Sound Community College
27. South Seattle College
28. Spokane Community College
29. Spokane Falls Community College
30. Tacoma Community College
31. Walla Walla Community College
32. Wenatchee Valley College
33. Whatcom Community College
34. Yakima Valley Community College

APPENDIX D

U.S. Department of Education Assessment Permission

Assessment Use Request

From: Erin Frasier [mailto:efrasier@mail.brandman.edu]
Sent: Saturday, January 09, 2016 7:32 PM
To: edpubs@inet.ed.gov
Subject: Permission Request to Use Survey Instrument

1/9/15

ED Pubs
Education Publication Center
U.S. Department of Education
P.O. Box 1398
Jessup, MD 20794-1398

To whom it may concern:

I am a doctoral candidate in the Organizational Leadership program in the School of Education at Brandman University. I am conducting research regarding labor market responsiveness of community and technical colleges in Washington State. I respectfully request your permission to reprint and include the "Assessing Seven Dimensions of the College to Improve Labor Market Responsiveness Self-Assessment Questionnaire" in my research study. I am attaching a copy of the document that includes this assessment for your reference. Thank you for considering this request.

Sincerely,
Erin Frasier
E.D. Candidate, Organizational Leadership
Brandman University

Response Granting Assessment Use

From: EDcontactcenter <EDcontactcenter@edpubs.gov>
Date: Mon, Jan 11, 2016 at 9:24 AM
Subject: RE: Permission Request to Use Survey Instrument
To: Erin Frasier <efrasier@mail.brandman.edu>, "edpubs@inet.ed.gov"
<edpubs@inet.ed.gov>

Dear Customer,

Thank you for interest in U.S. Department of Education Publication Center, unless
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Participant Letter of Invitation

Erin Frasier
4/5/2016
vtc@lists.ctc.edu ⌄

[pdf] ParticipantBillofRights.pdf ⌄
84 KB

Dear Workforce Education Administrators,

This email is a request for your participation in research as part of my doctoral dissertation. The purpose of my research is to identify the degree to which workforce education administrators of the Washington community and technical college system perceive their institution's to be labor market responsive and to identify factors they believe to hinder or enhance their ability to be labor market responsive. Your contributions to this research will be a great benefit to our community and technical college system and the research findings will be shared.

I am requesting that you take the following survey, which should take less than 20 minute to complete: Labor Market Responsiveness Survey.
The survey will be open until April 20th.

Thank you in advance for your contributions to this research.

Sincerely,

Erin Frasier
Doctoral Candidate
Brandman University, School of Education

WEC President Support

Ryan Davis <rydavis@everettcc.edu>
4/6/2016
Erin Frasier; vtc@lists.ctc.edu ⌄

Happy Spring Everyone!

I would appreciate anyone who can help Erin out with her dissertation research. If you can spare 20 minutes for her project it would be much appreciated.

Thanks!

Participant Reminder Email

Erin Frasier
4/18/2016
vtc@lists.ctc.edu

 ParticipantBillofRights.pdf
84 KB

Good evening,

The Labor Market Responsiveness Survey will remain open for contributions from workforce education administrators through the end of this week. If you have not yet completed the survey, I would greatly appreciate your time in doing so.

Thank you to those that have already completed the survey!

Respectfully,
Erin Frasier

APPENDIX F

Research Participant's Bill of Rights

Any individual who is requested to consent to participate as a subject in a research study, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.

2. To be told what will happen in the study and whether any of the procedures, drugs or devices is different from what would be used in standard practice.

3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.

4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.

5. To be told what other choices he/she has and how they may be better or worse than being in the study.

6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.

7. To be told what sort of medical treatment is available if any complications arise.

8. To refuse to participate at all before or after the study is started without any adverse effects.

9. To receive a copy of the signed and dated consent form.

10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researcher to answer them. You also may contact the Brandman University Institutional Review Board, which is concerned with the protection of volunteers in research projects. The Brandman University Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA, 92618. Participants may also contact Dr. Tamerin Capellino, Dissertation Committee Chair at capelin@brandman.edu.

APPENDIX G

Informed Consent

INFORMATION ABOUT: Labor Market Responsiveness of Washington Community and Technical Colleges

RESPONSIBLE INVESTIGATOR: Erin Frasier, MS

PURPOSE OF STUDY: You are being asked to participate in a research study conducted by Erin Frasier, M.S, a doctoral student from the School of Education at Brandman University. The purpose of this mixed methods study is to examine the degree to which Washington State community and technical college workforce education administrators perceive their institutions to be labor market-responsive based on the U.S. Department of Education's seven dimensions of labor market responsiveness and to explore the factors impacting each of the seven dimensions The seven dimensions of labor market responsiveness include: 1) leadership and governance, 2) organizational structure and staffing, 3) organizational culture, 4) resources and funding, 5) information and data, 6) relationship-building, and 7) partnerships. This study has the potential of providing several tools to assist college administrators with strategic planning concerning institutional dimensions of labor market responsiveness. The results of this study may also inform policy makers about needed resources to strengthen the community and technical college's role in workforce development.

I understand that:

a)   I may refuse to participate in or I may withdraw from this study at any time without any negative consequences. Also, the investigator may stop the study at any time.

b)   This survey takes approximately 20 minutes to complete.

c)   No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law.

d)   The investigator will protect my confidentiality by keeping the identifying codes and research materials in a locked file drawer that is available only to the investigator.

e)   If the study design or the use of the data is to be changed I will be so informed and my consent obtained.

f)   If I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor Academic Affairs, Brandman University, 16355 Laguna Canyon Road, Irvine, CA 92618 Telephone (949) 341-7641.

If you have any questions about completing this survey or any aspects of this research, please contact Erin Frasier at efrasier@mail.brandman.edu or by phone at 360.942.8254; or Dr. Tamerin Capellino, Dissertation Chair, at capelin@brandman.edu.

* ELECTRONIC CONSENT:

Clicking on the "agree" button indicates that you have read the informed consent information above and you voluntarily agree to participate.

○   AGREE: I acknowledge that I have received a copy of this form and the research participant's Bill of Rights. I have read the above and understand it and hereby consent to participate in the study.

Codebooks for Qualitative Data

Table H.1: Enhancing Factors Codebook

Inductive Code	Description
Resources	colleges have the resources needed to be labor market responsive
FinacialResources	the college has adequate financial resources for workforce development
Grants	the college receives grant funds for workforce development
GrantFocus	the college gives priority to seeking grant funding
FedGrants	the college receives federal grant funds for workforce development
Perkins	Perkins funding supports workforce development
GrantWriter	the college has a grant writer
StateGrants	the college receives state grants for workforce development
WorkerRetraining	Worker Retraining funds support workforce development
JSP	Job Skills Program funds support workforce development
LMIGrantProposals	the inclusion of LMI in grant applications increases grant awards
DedicatedFunds	adequate funding is dedicated to workforce education
Information	the college has access to and uses information and data resources
InformationResources	information/data resources are available
InfoSoftware	the college has predictive analytic software
Surveys	the college uses customer/student surveys to gather further information/data
InfoDashboards	the college provides access to data dashboards for staff
LMIAccess	the college has access to LMI
InfoCEO	Centers of Excellence are a resource for information/data
InfoESD	the Employment Security Department is a resource for information/data
InfoWDC	the WDC is a resource for information/data
DataUse	college uses data
DataInformDecision	decision making is data-informed
ProgReviewLMI	LMI is used in program reviews
LMIProposals	labor market information is used in grant applications/program approvals
HumanResources	colleges have the human resources necessary to be labor market responsive
AdminLevels	college has adequate workforce education administration
IRStaffLevels	adequate staffing level in the IR department
Time	staff workloads allow time for labor market responsiveness
Foundation	the college foundation supports workforce development
Leadership	college leadership supports economic/workforce development
LeadCommittment	leadership is committed to/engaged in workforce/economic development
PresCommit	the president is committed to/engaged in workforce/economic development
LeadEmpowerStaff	leadership empowers staff to fulfill a workforce/economic development role

StaffInvolved	staff are empowered to be involved
StaffInformed	staff are informed
FacProfDev	investments in the professional development of workforce education faculty
StaffRoles	staff have clear roles
LeadEffective	leadership style/skills are effective
LeadProactive	leaders are proactive in looking for opportunities and responding to changing economy
LeadVisionary	leadership is future oriented/forward thinking/visionary
LeadCollaboration	internal leadership collaboration exists
Engagement	the college is involved in economic development activities and partnerships
EngageBusIndust	engagement with business and industry for workforce development
EngageWDC	engagement with Workforce Development Councils for economic/workforce development
EngageColleges	college engagement with other colleges for economic/workforce development
EngageHS	engagement with high schools for economic/workforce development
EngageElectedOfficials	engagement with elected officials for economic/workforce development
EngageLabor	engagement with labor organizations for economic/workforce development
EngageEDC	engagement with Economic Development Council for economic/workforce development
WFFocus	factors exist that emphasis workforce development/education
MissionWFEd	the college's mission statement includes workforce education/development
FundAltFocus	focus on securing alternate funding for workforce education
WFEdUnderstanding	understand the needs of workforce education including the need to be nimble/flexible
StratPartner	partnerships supported by the college are strategic for workforce development
FundRequiresFocus	funding stream requires focus on workforce education
StratPlan	college's strategic plan supports workforce education/development, partnerships, etc.
WFEdOfferings	workforce education offerings are a large portion of college offerings
VisionED	vision statement includes college's role in economic development
Organization	elements of the organization's structure and culture support workforce/economic development
CreditNonCredit	there is collaboration between credit and noncredit staff/depts
CredNonCredDept	credit and noncredit are unified under one department
TechCollege	the structure/mission of a technical college strengthens labor market responsiveness
IRDept	there is a department dedicated to institutional research
NonCredit	there is strong noncredit programming existance
CareerServices	the college provides career services for students
BusEngageDept	there is a department dedicated to business engagement
CrossFunctional	college utilizes cross-functional teams
WFTransferCollaboration	there is collaboration between workforce education and transfer programs
AdvisoryBodies	the use of advisory bodies promotes labor market responsiveness

AdvBodyMembers	advisory body membership represents program industries
AdvBodyRoles	advisory body members understand their roles
AdvBodyLeaders	advisory bodies are made up of the senior leadership from ED partners
AdvBodyCurric	advisory body guides curriculum
AdvBodyEquip	advisory body guides equipment needs
AdvBodyFacExp	advisory body guides return to industry experience for faculty
AdvBodyIntern	advisory body guides internships and opportunities
AdvBodyMission	advisory bodies are mission driven
PartnershipPromoters	the college promotes economic/workforce development partnerships
PartnerRecognition	the college provides recognition for its economic development partners
ProgramPartners	specific programs bring partnerships
SmallCommunity	small community increases partnership development
Location	the location of the college positively impacts partnership opportunities
CoLocation	the colocation of college and economic development partners
WBL	work-based learning activities increase partnerships
AlignmentFocus	alignment between the college and economic development/labor market
AlignProgDev	program content/development is aligned to labor market needs
AlignProgLM	program offerings are aligned to labor market needs
Experience	experience of the staff/leadership strengthens responsiveness to the labor market
ExperienceWFEd	leaders have workforce education experience
ExperienceFac	faculty experience
ExperienceIndustry	experience with specific industries
ExperienceLMI	experience with labor market information
ExperienceNatl	national level experience
ExperienceWA	experience specific to Washington State
ExperienceFunds	experience with finding funding sources
IRStaffExperience	IR staff have adequate experience
Entrepreneurial	characteristics of entrepreneurialism are displayed and are supported
Innovation	innovation is displayed by staff/leadership and is supported
Creativity	creativity is displayed by staff/leadership and is supported
Risk	risk-taking is displayed by staff/leadership and is supported
BoardTrustees	the board of trustees support the economic development role of the college

Table H.1: Hindering Factors Codebook

Inductive Code	Description
ResourceLimits	colleges do not have the resources needed to be labor market responsive
HumanResourcesLimits	the college does not have adequate human resources to be labor market responsive
TimeLimited	limited time for staff to commit to labor market responsiveness
TimePartnerships	limited time to develop partnerships
TimeEventsLimited	limited time to attend economic development events
TimeProgDevelopment	limited time to focus on workforce education program development/revision
FinancialResourcesLimits	the college does not have adequate financial resources needed to be labor market responsive
Costs	costs are a hindrance to being labor market responsive
ExpenseEquip	program equipment expenses
ExpenseCurric	curriculum development expenses
ExpenseFacProfDev	expense of continuous professional development for WF faculty
StateAllocModel	state allocation model does not support workforce education
WFFundLimit	limited funding/budget allocations for workforce education
FundCommunication	internal communication about funding opportunities is limited
MarketingFunds	adequate funds are not available for marketing
InformationLimits	the college does not have adequate access to information
KnowledgeWFEd	limited internal knowledge/understanding about workforce education offerings/impact/students
StudentOutcomesLimited	limited ability to track student outcomes data
KnowlegeEconLimited	limited knowledge of the local economy
RealTimeData—	limited or no access to real-time data
LocalData—	no access to local data
LMIAccessLimited	limited access to LMI
LMISoftware—	no access to LMI software/databases
LMILowPriority	labor market information is lower priority than other institutional data
OrganizationBarriers	elements of the organizations structure and culture do not support workforce/economic development
FacultyBarriers	faculty impose barriers to the college's ability to be labor market responsive
FacProgDecision	programming decisions are based on FT faculty
TransferFacLead	strong role of transfer faculty steer priorities/minimize workforce education priorities
FacHiringLimits	limited ability to hire faculty based on programming need
NonCredBarriers	noncredit programming is not supported
NonCredLowPriority	noncredit offerings are not given high priority
NonCredResourceLimit	noncredit offerings are not adequately resourced
NonCredResist	resistance to noncredit offerings for WF Ed (fear they endanger credit offerings)

NonCredWFLimit	noncredit offerings for workforce education are limited
CollaborationLimit	there is limited intercollege collaboration for workforce development
IRDeptLimits	the IR department is a limited resource for labor market responsiveness
IRStaffLimit	limited IR staff
IRDeptUse—	they do not utilize the IR department
IRExperienceLMILimited	IR staff have limited experience with LMI
ChangeResist	a resistance to change
OrgChartLimit	the organizational chart is not adequate to support workforce development
WFAdminLimits	there is a lack of adequate workforce education administration
ProgramReview	the program review process does not result in changing/eliminating programs when not in alignment with labor market needs
Bureaucracy	institutional processes impede program development
WFFocusLimited	workforce development/education is not supported
TransferPriority	higher priority given to transfer than to workforce education
ExternalFocusLimited	not externally focused
VisionEDUnclear	lack of clear vision/direction from leadership concerning economic/workforce development role
FundAltFocus—	no focus on securing alternate funding for workforce education
WFEdDisrespect	disrespect for WF programs, admin., faculty and/or students
WFEffortLimit	only workforce education department/staff make efforts to be labor market responsive
MissionBarriers	college mission does not support workforce development
MissionWFLimited	limited focus on workforce education in the college mission
MissionCompetition	competing missions within the same institution
TradStudentFocus	focus on traditional students (not workforce ed populations)
LeaderLimits	leadership actions do not support labor market responsiveness
LeadEffectLimited	effective leadership is limited (style, abilities)
LeadTurnover	frequent and/or large turnover in leadership
LeadCommittmentLimited	limited commitment to/engaged in workforce/economic development
LeadFavor	favoritism by leadership in decision-making
StaffInvolveLimit	the involvement of staff in workforce/economic development is limited
CommunicationBarriers	communication barriers
ComInternalLimit	information is not communicated to all college staff, all the time
ComLMILimited	labor market information is not adequately communicated throughout the college
ComPartnersLimited	lack of or breakdown in communication with partners
NonTransparent	discussions and decisions are had in isolation
EngagementLimited	there is limited engagement that supports labor market responsiveness
EngagePartnerLimited	limited engagement with economic development partners
EngageNewPartner—	no focus on engaging new partners (maintain status quo)
EnageAlumniLimited	connections with alumni are not strong or utilized
FacEngageLimited	there is limited engagement from faculty in program development or outreach

AdvBodyLimited	advisory bodies are underutilized
LocationLimit	the location of the college limits its ability to be responsive to the labor market
Rural	population and industry are small in service area
LMDiverse	large service area and/or diverse labor market needs
EntrepreneurialBarriers	entrepreneurialism is not supported
InnovationLimited	innovation is not supported
RiskLimited	perceived/actual limitations on taking risk
MarketingLimits	marketing efforts do not support workforce development
MarketingEffortLimit	small scope or limited marketing efforts
MarketingFunds	adequate funds are not available for marketing
AlignmentFocusLimited	limited focus on alignment between the college and economic development/labor market
LMILast	labor market information is sought after a program proposal is made (program proposal is not based on LMI)
FundsFirst	funds are sought first and then a program is designed to meet deliverables
Competition	competition for workforce development role
CompeteColleges	competition with other community colleges
CompeteProviders	competition with other training providers

Coding Frequency Tables for all Enhancing Factors

Table I. 1: Enhancing Factors Code Frequencies

Inductive Code	Respondents	References
Resources	26	80
FinacialResources	20	38
Information	15	28
HumanResources	4	6
Foundation	4	5
Leadership	22	44
LeadCommittment	14	22
LeadEmpowerStaff	9	12
LeadEffective	5	7
LeadCollaboration	2	3
Engagement	16	44
EngageComm	8	9
EngageEmployer	5	7
EngageWDC	3	5
EngageIndustry	3	4
EngageColleges	2	2
EngageHS	2	2
EngageElectedOfficials	1	1
EngageLabor	1	1
EngageEDC	1	1
WFFocus	21	43
MissionWFEd	10	15
FundAltFocus	8	8
WFEdUnderstanding	5	6
StratPartner	3	3
FundRequiresFocus	2	2
StratPlan	2	2
WFEdOfferings	2	2
VisionED	1	1
Organization	15	31
CreditNonCredit	8	9
TechCollege	3	6
IRDept	4	4
NonCredit	3	3
CareerServices	2	3
BusEngageDept	2	2

CrossFunctional	2	2
WFTransferCollaboration	1	1
AdvisoryBodies	9	27
AdvBodyMembers	5	5
AdvBodyRoles	2	4
AdvBodyLeaders	2	2
AdvBodyCurric	1	1
AdvBodyEquip	1	1
AdvBodyFacExp	1	1
AdvBodyIntern	1	1
AdvBodyMission	1	1
PartnershipPromoters	9	14
PartnerRecognition	2	4
ProgramPartners	3	3
SmallCommunity	1	3
Location	2	2
CoLocation	1	1
WBL	1	1
AlignmentFocus	10	13
AlignProgDev	3	3
AlignProgLM	3	3
Experience	8	13
ExperienceWFEd	3	4
ExperienceFac	2	2
ExperienceIndustry	2	2
ExperienceLMI	1	1
ExperienceNatl	1	1
ExperienceWA	1	1
ExperienceFunds	1	1
IRStaffExperience	1	1
Entrepreneurial	5	12
Innovation	4	6
Creativity	1	2
Risk	1	1
BoardTrustees	1	2

Table I. 1: Hindering Factors Code Frequencies

Inductive Code	Respondents	References
ResourceLimits	28	122
HumanResourcesLimits	20	43
FinancialResourcesLimits	17	35
InformationLimits	16	29
OrganizationBarriers	22	51
FacultyBarriers	10	13
NonCredBarriers	8	11
CollaborationLimit	7	10
IRDeptLimits	5	7
OrgChartLimit	2	3
WFAdminLimits	3	3
WFFocusLimited	12	34
TransferPriority	6	8
ExternalFocusLimited	3	5
VisionEDUnclear	4	4
FundAltFocus—	3	4
WFEdDisrespect	3	3
WFEffortLimit	2	3
MissionBarriers	2	3
TradStudentFocus	1	3
LeaderLimits	15	26
LeadEffectLimited	7	10
LeadTurnover	6	7
LeadCommittmentLimited	3	4
LeadFavor	2	2
StaffInvolveLimit	1	1
ChangeBarriers	11	19
LocationLimits	6	9
ChangeResist	3	4
Bureaucracy	2	2
ProgramReview	2	2
ProgramApproval	1	1
CommunicationBarriers	10	14
ComInternalLimit	7	10
ComLMILimited	2	2
ComPartnersLimited	1	1
NonTransparent	1	1

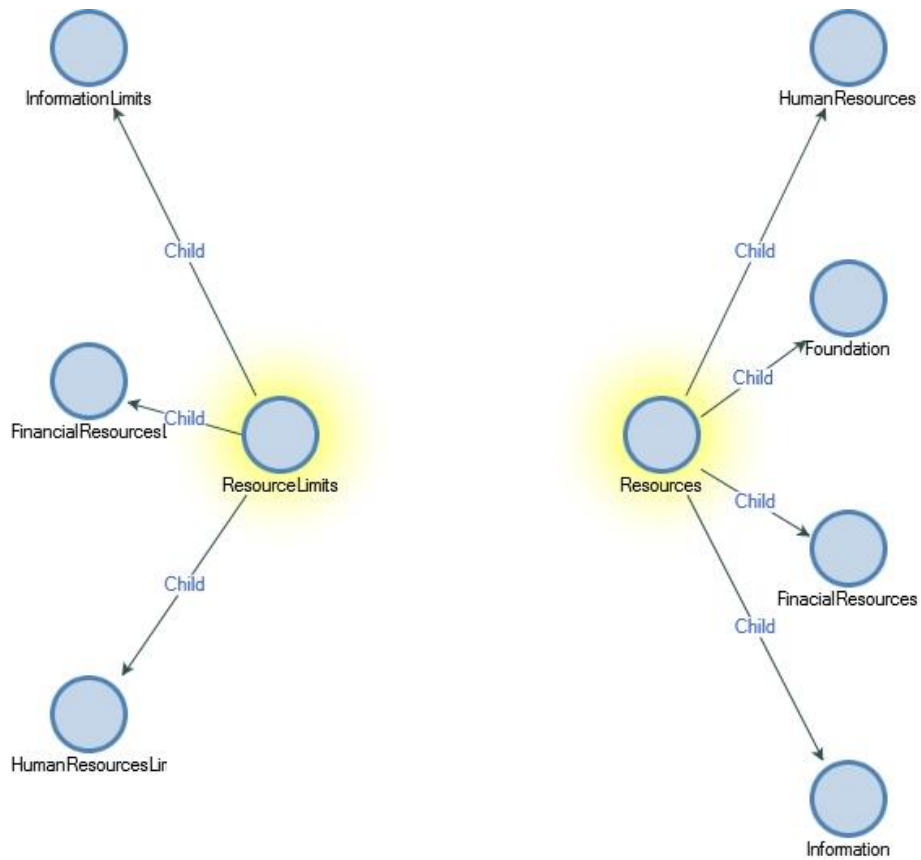**Inductive Code Similarities by Theme**
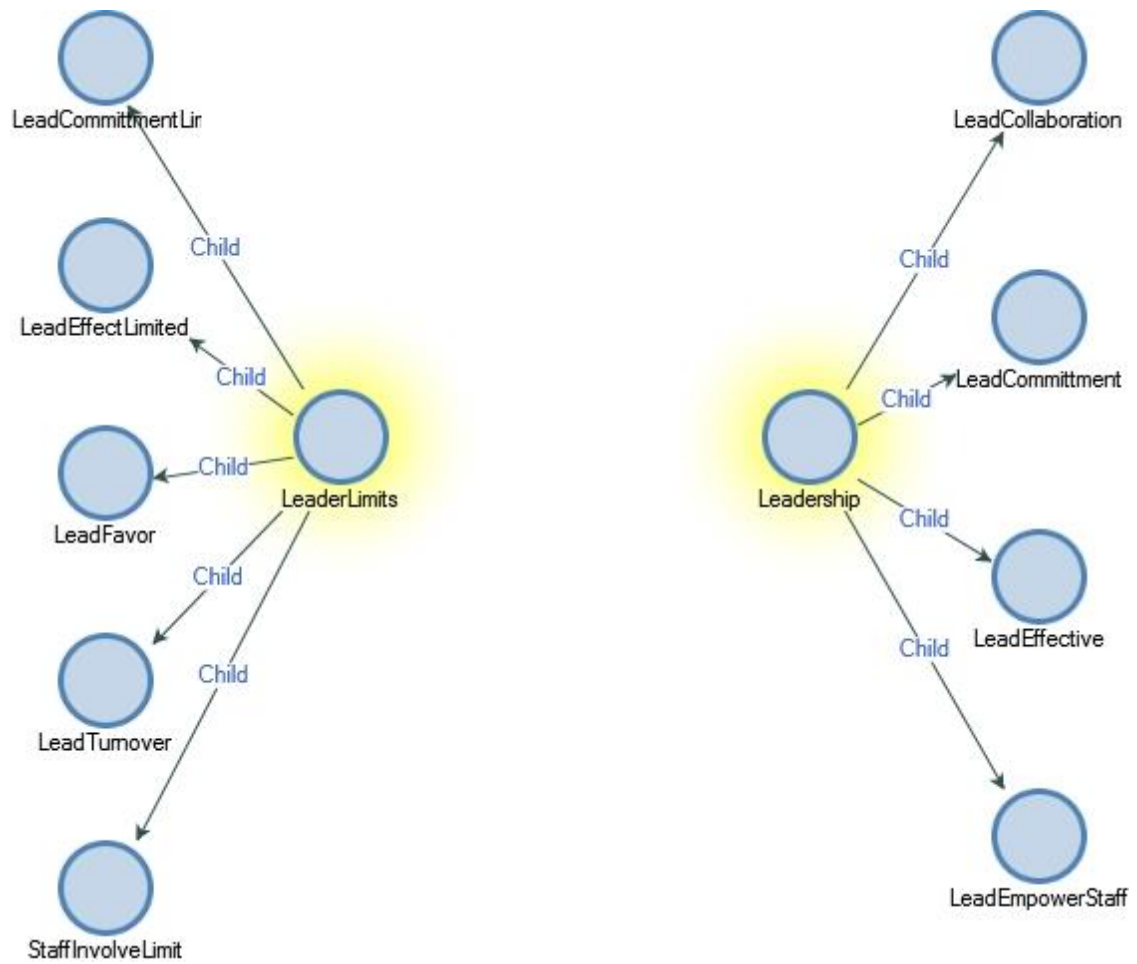

Figure J.1. Resources and Resource Limits

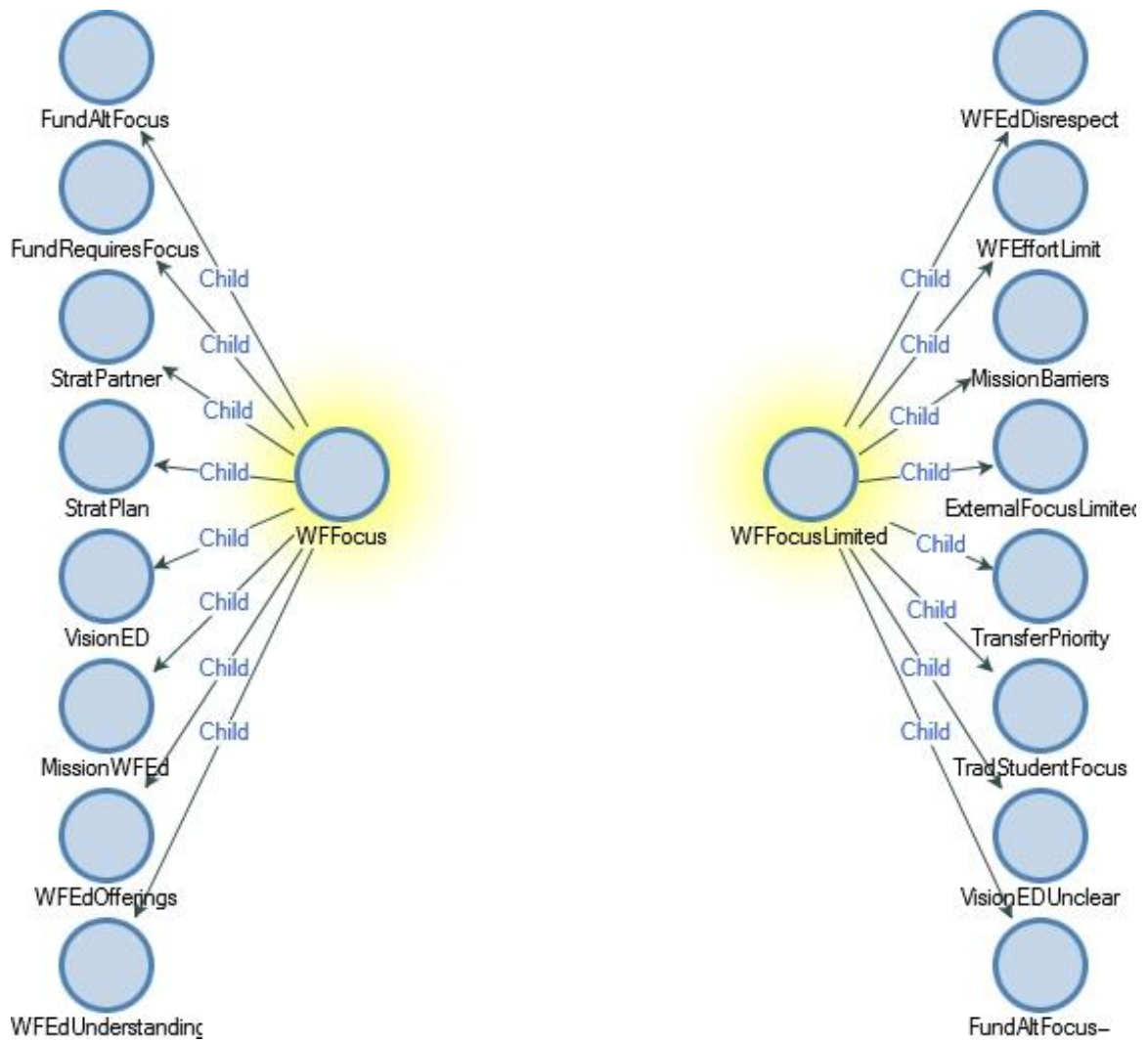*Figure J.2.* Leadership and Leadership Limits

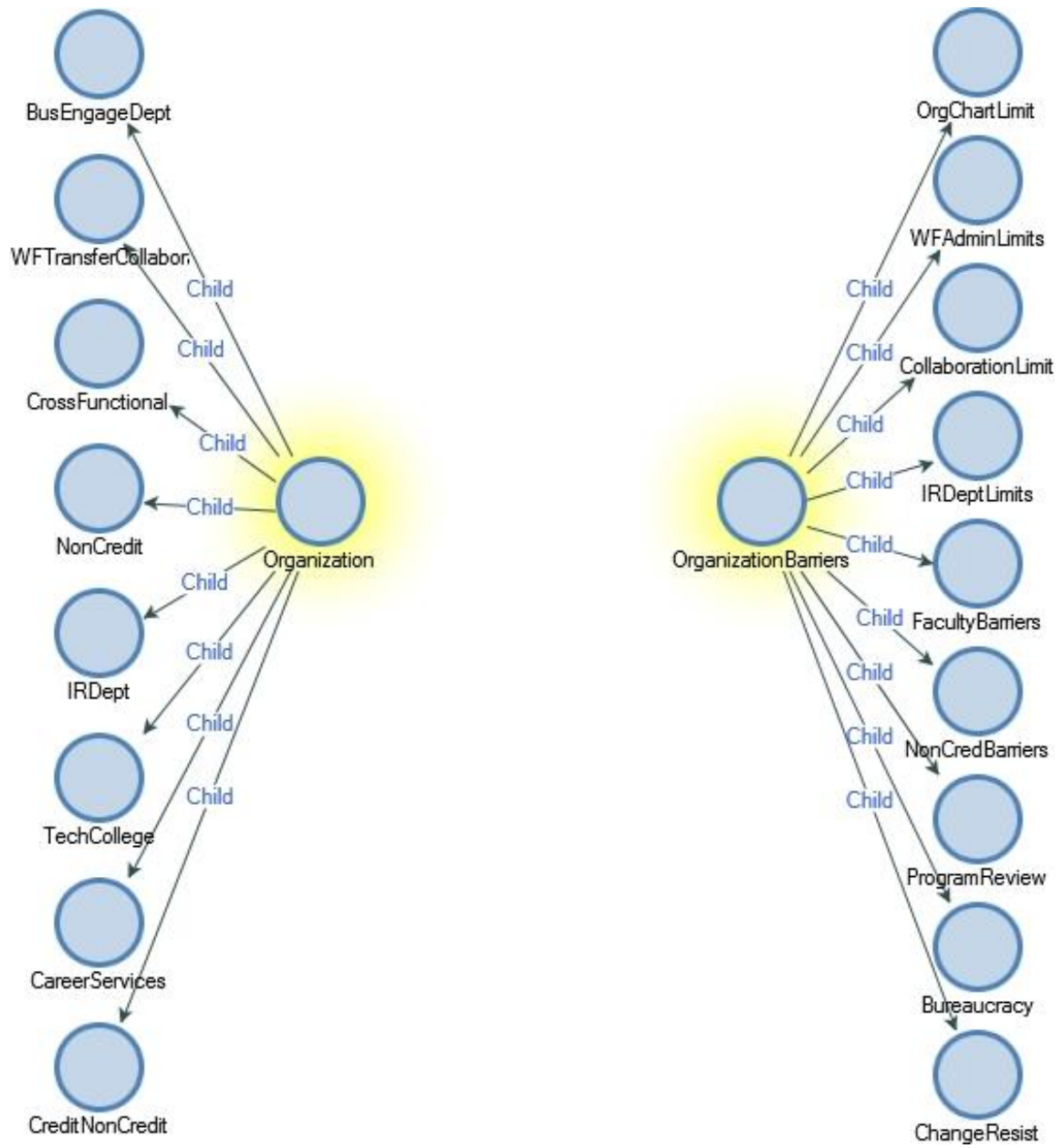*Figure J.3.* Workforce Focus and Limited Workforce Focus
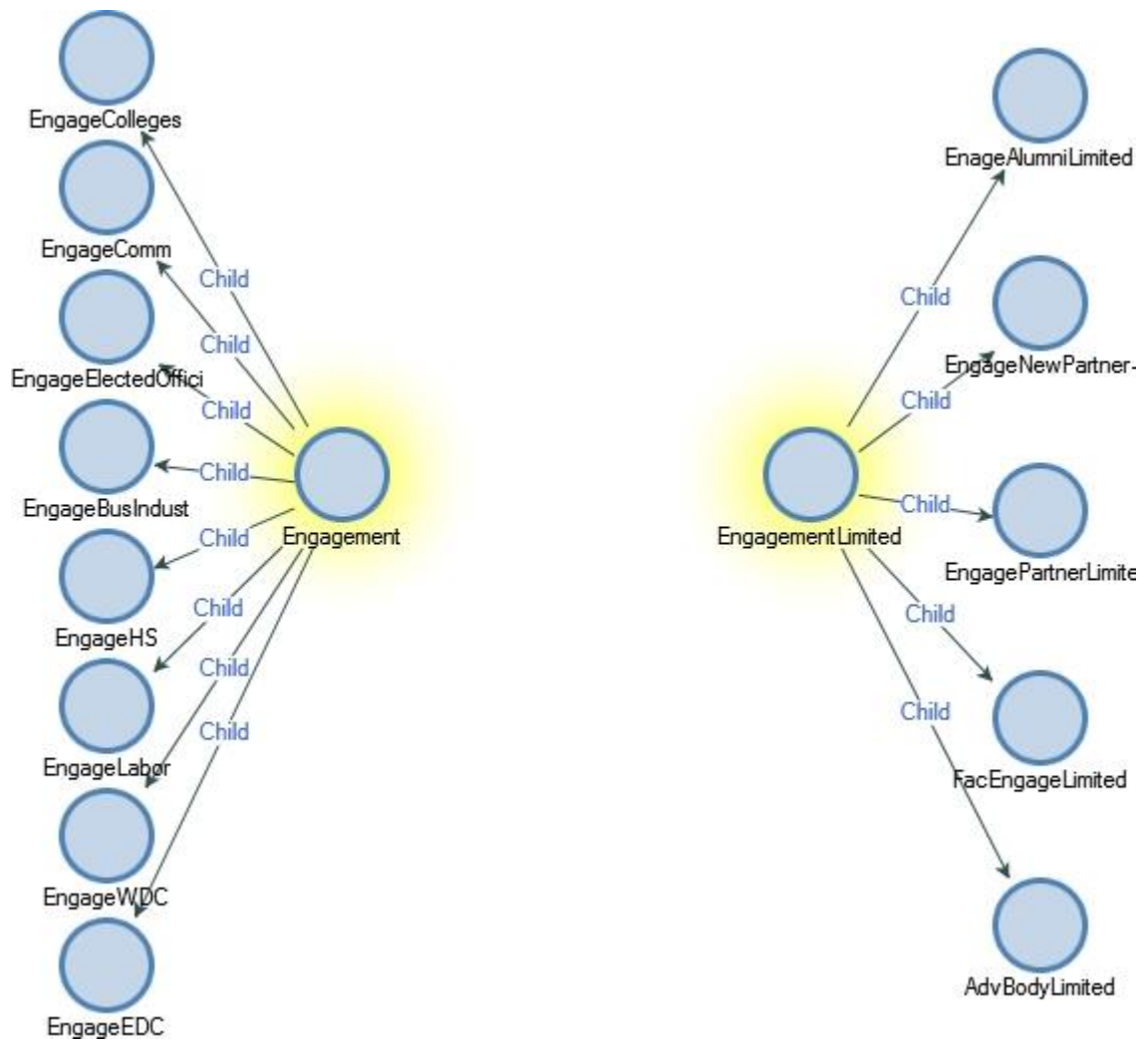
Figure J.4. Organization and Organizational Barriers

Figure J.5. Engagement and Limited Engagement