

A CASE OF ONE RURAL COMMUNITY COLLEGE AND THE DEVELOPMENT OF A
LEARNING REGION

By

Aleece B. Hodges

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Higher, Adult, and Lifelong Education – Doctor of Philosophy

2015

ABSTRACT

A CASE OF ONE RURAL COMMUNITY COLLEGE AND THE DEVELOPMENT OF A LEARNING REGION

By

Aleece B. Hodges

Community colleges have traditionally assisted students in gaining affordable education to either transfer to a four-year college, or receive technical training to enter the workforce (Kahlenberg, 2012; Laanan, Hardy, & Katsinas, 2006). Since the economic downturn of 2008 there has been greater pressure put on community colleges to update their programs in order to re-train dislocated workers in areas of need and to play a greater role in their local communities to assist in improving economic opportunities (Phelps, 2012). Current research on the role community colleges play outside their academic offerings is very limited. Additionally, current research does not distinguish among varying types of community colleges. The Carnegie Classifications made their first sub-classifications in 2005 which identified community colleges as either urban, suburban, or rural (Carnegie Foundation for the Advancement of Teaching and Learning, 2013). Since the new sub-classifications there has not been research examining rural community colleges.

Using the learning region framework and the concept of human capital as conceptual frameworks the purpose of this study was to examine how one rural community colleges engages with their local community. Specifically, this study identified who the key stakeholders were that the college worked with most closely. Second, this study examined the relationships between the stakeholders, and how the college supported lifelong learning and economic

development for the region. Data was collected through interviews, observations, document review, and a survey of business owners.

The findings of this study suggest that the rural community college has stronger relationships with their stakeholders when they have a specific project to work on. The findings also indicate that the relationships with their key stakeholders are dependent on strong leadership and leaders that are committed to improving the local community. Challenges experienced by the rural community college that inhibit their ability to connect with their stakeholders were limited resources and a negative community mentality around lifelong learning. The study also found that the college does not serve as a driver of economic development for the region, but rather works to support a separate economic development organization in the region. The implications of these findings on the rural community college and future research are also presented.

Copyright by
ALEECE B. HODGES
2015

I dedicate this dissertation to my daughter, Cecilia Briel, who was born in the middle of my data collection. I hope that she will always know that she can be whatever she dreams and I will be her biggest cheerleader through life just like my mother has been for me.

ACKNOWLEDGEMENTS

There are so many people to acknowledge and give my sincerest thanks for supporting me throughout my PhD program. I must first begin with thanking my mother for raising me to believe that I could do anything I wanted to do. Whether it was become the first female President of the United States or to get my PhD. Although I opted for the PhD I think she secretly still wants me to try for the presidency so she can decorate the White House at Christmas.

To my husband and editor. I couldn't have finished without your support and constant editing of all the various papers that got me to my dissertation. I'm so lucky to have a partner who is supportive of my dreams and continually reminded me that I would finish and graduate one day. You will now get to know what it is like to be married to a non-graduate student! I promise not to bring papers in the car anymore to edit while we are driving.

I've been lucky to be a part of two amazing cohorts in my graduate school career. First, my master's cohort which was made up of seven amazing women. You all inspired me to pursue my PhD and supported me through the crazy application process. You made being in grad school so much fun that I wanted to do it again! To my PhD cohort- you guys have been through the gauntlet with me. Somehow we've made it to the end together and I can't thank you enough for keeping me motivated throughout the past 4 1/2 years.

To my advisor, Brendan, thank you for taking me on as an advisee and for helping me become a better writer and researcher. You were always able to get through to me what I needed to change in my writing to make my work the best it could be. Thank you for the countless edits and time commitment to all my various drafts.

A huge thank you to my dissertation committee members, Marilyn Amey, Roger Baldwin, and Thomas Hammond. Thank you for taking the time to read through my proposal and dissertation and providing me with guidance on how to make my study the best it could be. I definitely could not have gotten to this point without all of your assistance. Chris Hammond also played a critical role in assisting me through my data collection and I am forever grateful for all of her assistance. A special thank you also goes to Chris Hammond for assisting me in making important connections for my research. Without her welcoming spirit this study would not have been possible.

Lastly, to Noah Drezner, you inspired me to pursue my PhD and were with me through all the crazy applications, GRE, and decision-making. Your teaching and mentorship have meant the world to me and I definitely would have never even thought about getting a PhD if it weren't for you.

TABLE OF CONTENTS

LIST OF TABLES	x
LIST OF FIGURES	xi
KEY TO ABBREVIATIONS	xii
Chapter 1: Introduction	1
Rationale for Study	2
Research Questions	6
Conceptual Framework	6
Methodology and Data Collection	8
Definition of Terms	8
Organization of Dissertation	11
Chapter 2: Literature Review and Conceptual Framework	12
Rural Communities	12
Community Colleges	14
Role of Community Colleges	16
Rural Community Colleges	17
Partnerships	21
Economic Development and Higher Education Literature	23
Economic Development and Community Colleges	29
Implications and Gaps in the Literature	33
Conceptual Framework	35
Human Capital	35
Learning Region	37
Chapter 3: Methodology	46
Research Questions	48
Conceptual Framework	48
Case Site Selection	50
Data Collection	52
Participant Selection	56
Interview Protocol	57
Methods to Protect Participants and Institutional Review Board	60
Analytical Approach	60
Trustworthiness	63
Limitations	66
Chapter 4: Findings	68
Local Community and Community Organizations	68
Local Industries and Great Lakes Economic Coalition	77

K-12 Schools.....	83
Government Agencies.....	87
Conclusion	88
Chapter 5: Findings	91
Learning Region Concepts.....	91
Interconnectedness.....	92
K-12	94
Community Organizations.....	99
Industries and GLEC.....	102
Government Agencies.....	107
Business Owners/Managers	111
Summary	113
Challenges to Interconnectedness	115
Lifelong Learning and Investment in the Individual	118
Challenges to Lifelong Learning	122
Economic Development.....	125
Challenges to Economic Development.....	131
Additional Themes.....	132
Conclusion	136
Chapter 6: Discussion and Implications	138
Review of Findings.....	138
Discussion.....	142
Implications for Research	146
Implications for Practice	149
Conclusion	151
APPENDICES	153
Appendix A Description of Observations.....	154
Appendix B Random Sample Interview Questions	155
Appendix C Preliminary Interview Questions.....	156
Appendix D Final Interview Questions	157
Appendix E Vignettes.....	158
Appendix F Second Round Interview Questions.....	160
Appendix G IRB Approved Consent Form	161
Appendix H Contact Summary Sheet	163
Appendix I List and Definition of Codes.....	164
Appendix J Pattern Codes.....	166
Appendix K Interim Case Summary.....	167
BIBLIOGRAPHY.....	175

LIST OF TABLES

Table 1:	Document Review List	55
Table 2:	List of Participants	57
Table 3:	List of Follow-up Interview Participants.....	59
Table 4:	Preliminary Codes	164

LIST OF FIGURES

Figure 1:	Adaptation of Longworth's Learning Region Model	40
Figure 2:	Sample Model for Study.....	45
Figure 3:	Conceptual Representation for this Study	49
Figure 4:	NCC's Key Stakeholders	90
Figure 5:	Learning Region Model for NCC.....	115
Figure 6:	NCC's Community Stakeholder Relationships	139
Figure 7:	Proposed Learning Region Model.....	141

KEY TO ABBREVIATIONS

ISD	Intermediate School District
GLEC	Great Lakes Economic Coalition
NCC	Northern Community College
RCCI	Rural Community College Initiative

Chapter 1: Introduction

Community colleges play a critical role in the development of their local and regional communities (Grayson, 2012). As centers of adult learning, their position within the structure of a community is unique, and community colleges frequently offer opportunities for experiences or education to a demographic or group of people not readily served by any other community institution. Within community colleges, community development can take many different forms, including relationship-building between the institution and local government, providing educational training and seminars, and bringing cultural activities to the community (Longworth, 2006). Recently, lifelong learning has become the primary focus for many community colleges and their surrounding communities, and this shift represents a new way of thinking about the development of citizens and a new opportunity to invest in those who reside within the region served by the institution (Longworth, 2006). Some communities are beginning to embrace the notion that the entire region should be focused on the continual improvement of its citizens and become a *learning region* (Longworth, 2006), which is a broadening of the more traditional view of community colleges.

In addition to community development, institutions of higher education play an increasingly important role in economic development around the world (Elliot, Levin, & Miesel, 1988; Gais & Wright, 2012; Lane, 2012; Trani & Holsworth, 2010). In the United States in particular, such institutions play a critical role in developing the economic opportunities of a state or region through workforce development in support of critical occupations, conducting research relevant to local economies, and disseminating new knowledge in related fields (National Governors Association, 2013). Although all types of higher education institutions impact economic development, community colleges are becoming a focal point for many

communities as a particular catalyst for economic development opportunities (Grayson, 2012; Jacobs, 2012) because the community college's unique role in their community allows them to address local economic concerns in a flexible and effective manner. Community colleges are connected to both public and private entities, and as such, they are often seen by both communities and governments as a prime source for economic development (Jacobs, 2012), as they are capable of bridging the gap between two separate realms of economic influence. Additionally, community colleges can offer relatively quick training for displaced workers and get individuals back into the workforce in a short period of time (Jacobs, 2012), due to their ability to be flexible with scheduling and create classes to fit their local community's need. However, despite the increased attention given to the role of community colleges in regional development, little research has been conducted on this topic and relatively little is known about the actual roles that community colleges play within their local and regional communities.

This study examines the extent to which characteristics of a learning region are present within a specific rural community college and the local community, with particular focus on how the leaders at the college view the college's role in regional (or community) economic development. The remainder of this chapter will provide a rationale for the study, introduce the research questions and conceptual framework, define key terms, and provide an outline for the remaining chapters.

Rationale for Study

In the 21st century, community colleges are being called upon to serve in many different capacities and to extend their original mission by transcending their previous role as open-access institutions that provide technical training and preparation for students to transfer to four-year institutions (Laanan, Hardy, & Katsinas, 2006). Community colleges are now facing more

challenges than ever, and they are facing pressure to have a greater hand in community and economic development and to increase graduation rates, cut spending, and retrain displaced workers for new jobs (Laanan, Hardy, & Katsinas, 2006). In many states there is now a skills gap, which means there are potentially thousands of jobs going unfilled because otherwise eligible workers do not possess the skills, education, and training necessary for the open positions (Levine, 2013). President Obama has called for community colleges to fill the job and skills gap in many states and regions where industries have shut down (Obama, 2009), and according to Steven Katsinas, a professor of education at the University of Alabama, community colleges are responding accordingly by transitioning into the role formerly filled by land-grant universities by becoming key intermediaries that work towards developing the nation's rural communities (Grayson, 2012).

As of 2007, rural community colleges accounted for nearly 60 percent of all the community colleges in the United States (Hardy & Katsinas), and enrolled 37 percent of all two-year college students, the single largest group (Eddy & Murray, 2007). In addition, rural community colleges are often located in economically depressed communities that have struggled over time to gain significant economic improvements (Eller, Martinez, Pace, Pavel, Garza & Barnett, 1998), placing such colleges in a unique role in their communities and opening a particularly potent opportunity for positive influence. Many adult learners are turning to their local community college as economic drivers because they are singularly equipped to quickly respond to local industrial needs (Moussouris, 1998). In addition, many community colleges are working to build partnerships with their local civic organizations and local industries that will help their students get jobs once they complete their degree or certificate (Phelps, 2012).

Although such partnerships, including those between urban and suburban community colleges, local governments, community organizations, and non-profits, have been common strategies for many communities to enhance their economic development in general, rural community colleges have struggled to engage in such partnerships (Eller, Martinez, Pace, Pavel, Garza & Barnett, 1998). The failure of such partnerships has been attributed to two factors: a lack of resources in rural areas and the lack of sufficient personnel to maintain the college while assuming extra responsibilities in aiding the community with economic development strategies (Eller et al, 1998).

This is particularly problematic for rural community colleges because of the deep benefit that these established partnerships are capable of providing. Many communities have turned to partnerships as a way to leverage economic recovery in difficult times by pooling their resources (Dominguez, 2006). Businesses have turned to partnerships with their local government to develop the local workforce so that there may be more qualified workers (Eberts & Erckcek, 2001). Additionally, there is an increasing demand in higher education to develop partnerships that may save resources and reduce expenditures (Eddy, 2010). However, as mentioned above, rural community colleges struggle to create economic development opportunities and maintain such partnerships due to their limited size and resources (Eller et al, 1998; Hardy & Katsinas, 2007).

Because of the demonstrated benefit of such partnerships, the Ford Foundation has attempted to aid struggling rural community colleges in overcoming these obstacles through the creation of the Rural Community College Initiative (RCCI). In the early nineties, the Ford Foundation founded the RCCI as a way to help distressed rural areas develop economic development strategies and move towards prosperity (Emery, 2008). The RCCI seeks to help

community colleges in targeted rural areas to expand access to postsecondary education and to help create regional economic development opportunities (Eller, Martinez, Pace, Pavel, Garza, & Barnett, 1998). One of the major findings in phase one of the RCCI was that rural areas struggle to form effective partnerships mainly due to lack of planning (Eller et al, 1998), which is complicated by their lack of resources and available personnel. Rural community colleges participating in RCCI struggled to be included in important economic development conversations within the community because they are traditionally not viewed as playing a role in economic development. Additionally, other organizations and non-profits were simply working so hard to maintain their own organizations that they did not have time to reach out in order to form new partnerships with the community college (Eller et al, 1998).

The RCCI is one example of how external organizations have tried to assist rural community colleges in utilizing partnerships and have attempted to create interconnectedness throughout the region in order to improve the educational and economic opportunities of that region. However, outside the RCCI, there is a limited understanding of the extent to which rural community colleges are engaging in economic development partnerships that may lead to a more interconnected community (i.e., a learning region). Additionally, current research does not expand on what types of organizations or businesses are likely to be the key stakeholders within these partnerships. This study will begin to address these gaps in the literature by first identifying who the key stakeholders are in the relationship between a particular rural community college and the local community and second by identifying what characteristics are needed to foster the development of a learning region in general.

The study will utilize the following guiding concepts, informed by Longworth's (2006) learning region framework: (a) interconnectedness, (b) lifelong learning, (c) the investment in the

individual, and (d) economic development. In addition, this study will also examine and seek to create understanding around how the key stakeholders are connected to the college and how they work together to promote the development of a learning region.

Research Questions

The main research questions guiding this study are:

1. What are the links between a rural community college and the local community?
2. To what extent are aspects of a learning region (i.e., linkages between key stakeholders, a belief in lifelong learning, investment in individuals and community, and a focus on economic development) present in the relationship between a rural community college and the community?

Conceptual Framework

The conceptual framework for this study is based on two main concepts: the learning region and human capital. First, the learning region framework assumes that a region with strategic links between all sectors of education, including informal educational opportunities, businesses, and cultural enrichment activities, is best able to promote development for all citizens throughout their lives (Longworth, 2006). Another main concept of a learning region is that economic development occurs through college-centered partnerships as a way to enhance the knowledge economy (Christopherson & Clark, 2010). The learning region framework also suggests that regions that utilizing this framework respond quickly and efficiently to change, especially with increased globalization (Longworth, 2006). Lastly, the learning region framework proposes that the value of education is found within linkages between an institution and the local economy (Keane & Allison, 1999). The concept of the learning region is well suited to guide this study in that the main principles of interconnectedness, community-wide

economic development strategies, and lifelong learning are all impacting community colleges in the 21st century.

Second, the concept of human capital proposes that an investment in education by individuals will create long-term economic benefits for society (Becker, 1993; Florida, 2002). According to the author, if an individual receives advanced education, that person will be able to work at a higher level, thus increasing their earning potential and allowing them to have a greater impact on the economy over the course of their lives. Over time, communities, states, and countries that invest in education for individuals will have long-term economic growth (Becker, 1993). The idea of investment in human capital is a critical concept adopted by all higher education institutions, and it is becoming an increasingly popular concept within communities and regions as the knowledge economy grows beyond the walls of traditional educational communities. Mr. Powers McMahon's (2009) research expands the idea of human capital beyond the capacity for education to increase one's wages to include higher education's non-market impact, such as better health and increased happiness. These characteristics are also important to consider when examining the relationship a college has with its local community.

The concepts of the learning region and human capital framed the current qualitative study by broaching the idea that higher education can benefit an individual and society. Together these concepts guided this study in its attempt to illuminate (a) how investing in the education of individuals through community colleges can have an impact on the economic opportunities of a region and (b) how connecting a community college with the establishments within a region will promote interconnectedness and shared responsibility for economic development of the region.

Methodology and Data Collection

This single qualitative case study was designed to produce the following outcomes: first, it was intended to identify the key stakeholders were for one rural community college, and second, this study examined to what extent aspects of the learning region concept were present between the rural community college and the local community. The community college selected for this study is classified as a medium-sized rural community college by the Carnegie Foundation and is located in the Midwest.

For this study, there were four modes of data collection. First, I conducted interviews with representatives from the selected community college, community members, state agency representatives, and representatives from local community organizations. Second, I observed four meetings between the community college and key stakeholders. Third, I reviewed a selection of newspaper articles, newsletters, and other documents available through the community college as part of the data collection. Lastly, I collected a sample of interviews of randomly selected local business owners as the fourth form of data collected for this study.

Definition of Terms

To assist in providing a common understanding of key terms used throughout the study, it is necessary to introduce and define these terms. There are four important terms that are used throughout this research study: (a) cross-sector partnerships (and collaboration), (b) economic development, (c) rural community college, and (d) the knowledge economy. These terms are guiding ideas for the study, and the presence of a common definition is important to understanding how each concept is viewed throughout the data.

Throughout the literature, the terms *partnership* and *collaboration* are often used interchangeably. Some scholars note a distinction between the two terms in stating that

collaboration often occurs between an individual and an individual, while a *partnership* tends to take place between two organizations (Siegel, 2010). In congruence with other scholars, in this study partnerships will refer to interactions at an organizational level between at least two organizations (Eddy, 2010; Siegel, 2010). More specifically, cross-sector partnerships refer to partnerships between different types of organizations. For example, cross-sector partnerships are formed between educational institutions, businesses, government agencies, and non-profit organizations (Selsky & Parker, 2005; Siegel, 2010). Cross-sector partnerships (CSSP) allow organizations to achieve goals and outcomes that would be impossible to achieve alone because organizations from different sectors are able to provide resources that were perhaps unreachable to a single organization on its own (Siegel, 2010). Additionally, CSSPs are primarily focused on addressing a social issue within the region (Siegel, 2010).

Second, defining the role of higher education in economic development is complex and well debated in the literature. For the purposes of this study, the term *economic development* will refer to the development of knowledge (Elliot, Levin, & Miesel, 1988; Lane, 2012; Trani & Holsworth, 2010), the production of skilled workers (Faraj, 1988; Phelps, 2012), and the advancement of innovation through technology (Bozeman, 2000; Trani & Holsworth, 2010; Zhao and Reisman, 1992). These three components of economic development have been selected as they are the prime definitions in the literature that focuses on the role that higher education institutions can play in economic development for a region. The phrase *economic development and higher education* refers to economic development that comes as a result of the involvement of higher education institutions in the community and in economic development strategies.

Next, this study used the Carnegie Classification of Institutions of Higher Education to

define rural community colleges. According to Carnegie's classification, rural community colleges may fall into one of three categories: small rural, medium rural, or large rural (Carnegie Foundation, 2013). Public rural serving categories are based on a full-year unduplicated credit headcount (Carnegie Foundation, 2013). Small rural community colleges have less than 2,500 students, medium rural colleges have between 2,500 and 7,500 students, and large rural colleges have over 7,500 students (Hardy & Katsinas, 2007).

Lastly, this study used the definition of a knowledge economy provided by Powell and Snellman (2004). Powell and Snellman (2004) state that a knowledge economy is primarily concerned about the production of knowledge-based activities that will contribute to the advancement of a region or country. Additionally, Powell and Snellman (2004) note that the knowledge economy is less reliant on physical inputs and more focused on the development of knowledge, meaning, for example, instead of training someone to be a welder it might be more beneficial to train them not only in welding but also in how to problem solve and use their skills in other types of work. This definition aligns with the current shift taking place in community colleges as more and more pressure is being placed on retraining workers by increasing their education in a way that they become adaptable to the changing needs of the community rather than being trained in a specific physical skill. Another aspect of the knowledge economy is the importance of creativity and innovation (Florida, 2002). Richard Florida (2002) notes that creativity and innovation are also important concepts that support growth in an individual and community. Florida (2002) also suggests that these two concepts will influence the economic development opportunities of a region, thus influencing the knowledge economy.

Organization of Dissertation

Chapter two of this dissertation reviews relevant literature on community colleges, economic development and higher education, and partnerships. The literature review is designed to provide first a broad overview of the role of community colleges in their communities and then will focus specifically on the role that rural community colleges play in community and economic development for their region. Additionally, the literature review addresses the role that community colleges play in several types of local and regional partnerships. Finally, the literature review presents information on the role that higher education institutions have played in working with the local community/region on improving economic development strategies.

Following the literature review, the conceptual framework for this study is reviewed at the end of chapter two. The conceptual framework will expand on how the concepts of human capital and the learning region guided this study. Chapter three defines the methodology and data collection process. Additionally, the third chapter presents analytical strategies that were used to analyze the relevant data collected from the case study. Chapters four and five present findings from the study, and chapter six offers interpretations of the data, conclusions, and recommendations for future research.

Chapter 2: Literature Review and Conceptual Framework

This study was informed by literature from scholarly work focused on community colleges, partnerships in higher education, and economic development and higher education. The literature discusses (a) characteristics of rural communities, (b) the evolving role of community colleges and the increasing demands on rural community colleges, (c) how partnerships between higher education institutions and communities are driving change, and (d) the role of higher education in economic development. These four bodies of literature provided a foundation for understanding the way that economic development has occurred and is currently at play within higher education institutions and, more specifically, within community colleges throughout the United States. Additionally, the partnership literature provided a context to understand the ways in which economic development has been occurring in higher education and the importance of relationship building between colleges and their surrounding communities. Following the literature review, the conceptual framework will be presented.

Rural Communities

Perhaps most important task in setting the stage for this study is first providing important information about the characteristics of rural communities. Rural areas are sometimes looked at through two distinct lenses. Some academics view rural areas as being lost causes, where people are fleeing for more opportunities in bigger cities (Depew, 2014). Other scholars retain a more positive outlook, and they see rural communities as having potential for growth, as they are attracting 30-49 year olds who desire to raise their families and start new businesses (Depew, 2014). The reality of the state of rural areas likely falls somewhere in between these narratives, with opportunities for some residents alongside challenges that are unique to rural areas. This

section will define rural communities, review the general state of education, and describe issues with transportation in rural communities in order to provide a foundation for this study.

The definition of rural communities is highly contested throughout the literature. Some researchers suggest that rural communities should be defined as those communities that have less than 2,500 residents (Cromartie & Bucholtz, 2008). Other research defines rural communities as any community with less than 50,000 residents (Cromartie & Bucholtz, 2008). Overall, a rural community is defined in three different ways. First, rural status can be determined by using a standard administrative approach that utilizes municipal or jurisdictional boundaries. A second way to define rural communities is by assessing land-use and determining how settled the geographical area is, which is the method used by the Census Bureau. Finally, rural communities can be defined by an economic concept, which could include a larger geographical area if there are other markets contributing to the community (Cromartie & Bucholtz, 2008). As noted in the introduction, rural communities are often described as having higher unemployment, lower wages, and increased health issues compared to cities and suburban communities. In addition, rural residents are faced with challenges of transportation and longer commutes to work, and have fewer students within the community gaining post-secondary education.

In terms of K-12 education, rural students outperform students in cities in all academic areas (Brown & Schafft, 2011). However, in terms of post-secondary education, rural areas have significantly fewer young adults with a bachelor's degree than cities and suburban areas. In rural areas, 19 percent of adults over 25 years old hold bachelor's degrees, compared to 30 percent in cities and 31.5 percent in suburban areas (Brown & Schafft, 2011). Simple access to higher education can play a role in this figure in rural communities, given that there may not be a community college or four-year institution located within driving distance for students to attend.

Transportation is another important issue that rural areas often struggle to overcome. Unlike urban areas, rural communities are often spread over a large amount of land, which poses unique challenges for rural residents. On average, rural workers travel 38 percent more miles than urban residents (Brown and Schafft, 2011). Longer distances to travel can also mean higher gas expenses and increased car maintenance (Zimmerman et al, 2008). With traditionally lower wages than residents in cities or suburban areas, the cost of transportation can be a significant financial burden for residents in rural communities. Community colleges in rural areas often service a large geographical area, and this can translate to students having to drive a significant distance to gain postsecondary education

Community Colleges

Community colleges are a type of higher education institution unique to the United States. The earliest types of community colleges were often found in local high schools (Trani & Holsworth, 2010). In the early 1900s the state of California was among the first to grant high schools the ability to offer college-level courses (Trani & Holsworth, 2010). Ten years later, many junior colleges had developed throughout the country, and after World War I there were more than 200 two-year colleges (Trani and Holsworth, 2010). The community college continued to develop after the first World War, and this development has continued to the present day, with the presence of independent junior colleges and community colleges that accommodate commuter students (Thelin, 2004). Today, there are more than 1200 public, independent, and tribal community colleges in the United States (Trani & Holsworth, 2010).

From their inception, community colleges have worked to serve their local community by being open-access institutions that serve their regional community in adult education, vocational training, and the preparation of students to transfer to four-year institutions (Thelin, 2004). As

the community college developed, community colleges also began to form direct partnerships with four-year institutions. Such partnerships usually had an articulated agreement that a student could complete his or her first two years at the community college and then transfer to the four-year institution to complete a bachelor's degree (Thelin, 2004).

Between 1945 and 1970 the United States experienced a significant growth in the higher education system, with the popularity of the GI Bill allowing veterans to attend college with federal scholarships (Thelin, 2004). By 1970, one-fourth of all first-year college students were attending community colleges (Thelin, 2004). Today, community colleges are still well-attended, and their enrollment is growing. Between 2000 and 2010 enrollment in public two-year colleges increased from 5.9 to 7.7 million students (Condition on Education, 2012). In 2010, 26 percent of all full-time undergraduate students and about two-thirds of all part-time undergraduate students were enrolled in public two-year institutions throughout the U.S. (Condition on Education, 2012).

In 1970, the Carnegie Commission on Higher Education developed a classification of all colleges and universities in the United States to aid in research and policy analysis (Carnegie Foundation, 2013). Although community colleges have been a part of the higher education landscape for over a century, the sub-classification of these colleges by geographical context has only recently occurred. Approximately every five years the Carnegie Commission on Higher Education updates the classification system (Carnegie Foundation, 2013). In the 2005 update, the Carnegie Foundation published the first geographical classification of community colleges. Currently, community colleges are separated into three categories: rural, urban, and suburban (Hardy & Katsinas, 2007). The Carnegie classifications went even further, distinguishing three sub-categories of rural community colleges: small, medium, and large (Hardy & Katsinas, 2007).

Small rural community colleges have less than 2,500 students, medium rural community colleges have between 2,500 and 7,500 students enrolled, and large rural community colleges enroll over 7,500 students (Hardy & Katsinas, 2007). These new sub-classifications allows researchers to better understand the commonalities and differences among student populations, curriculum offerings, financial aid needs, and student support services across different types of community colleges (Hardy & Katsinas, 2007). Additionally, these sub-classifications can allow researchers to better understand the specific role that each type of community college plays within their community, region, and state.

Role of Community Colleges

Community colleges have traditionally served two main functions. First, community colleges provide education and training to students that will improve employment opportunities through granting certificates and degrees (Kahlenberg, 2012). Second, community colleges serve as a gateway for many students who hope to transfer to a four-year institution (Kahlenberg, 2012). In the past decade, however, the role of community colleges has expanded from these two key functions towards a greater emphasis on filling the skills gap and improving regional economic opportunities (Phelps, 2012).

With the economic recession in 2008, community colleges have been called upon to respond to the changing economic landscape (Phelps, 2012). For community colleges, this means responding to the need for more postsecondary education for entry-level jobs and the need to retrain displaced workers (Phelps, 2012). In one of his first national speeches as President, Barak Obama announced that he wanted every citizen to have at least one year of postsecondary education (Boggs, 2009). Inherent in this goal is the use of community colleges as an avenue for many to achieve their one year of postsecondary education. Just months after this call for a year

of education for everyone, President Obama announced the American Graduation Initiative (AGI), which places the goal on the United States to have the highest proportion of adults with college degrees in the world by the year 2020 (Schneider & Yin, 2011). Specifically, Obama's goal was to have an additional 5 million people completing a degree by year 2020 (Obama, 2009).

The U.S. department of Education has estimated that enrollment in higher education institutions will increase 12 percent by 2018 (Jenkins, 2009). Community colleges would need to far exceed this 12 percent increase in order to even have a chance at achieving the 2020 goal (Jenkins, 2009). Given this fact, community colleges need to not only increase enrollment, but they must also increase the rate at which students complete a degree. Jenkins (2009) attributes low graduation rates at community colleges due to their "boutique" style of addressing student issues rather than a broad systemic change, which Jenkins argues is needed to increase graduation rate. Community colleges are currently working hard to ensure their students are completing degrees and certificates while simultaneously recruiting displaced workers who need to be retrained in a new technical area in an attempt to increase degree completion (Jenkins, 2009).

Rural Community Colleges

As noted in the introduction, rural community colleges account for 60 percent of all community colleges and enroll over one-third of all community college students (Hardy & Katsinas, 2007). Scholars are only beginning to understand the unique role of rural community colleges and explore ways that they may differ from their urban and suburban counterparts. Miller and Kissinger (2007) note that rural communities rely on social engines to drive the region's economy and serve as a foundation in building an identity for the area. In many

instances these social engines can be businesses, schools, and other organizations that bring a community together (Miller & Kissinger, 2007). Community colleges in rural areas are also a powerful social engine in themselves in the act of bringing the community together and driving economic strength (Miller & Kissinger, 2007).

Some parts of the United States have experienced greater challenges than others with the latest economic recession. With the collapse of the auto industry, the Midwest in particular has struggled to replace what was once a viable industry and discover their new role in the knowledge economy (Austin, 2012). Community colleges in this area of the country are being asked to help re-train these automotive industry workers in new jobs that will have longevity in the new marketplace (Obama, 2009). One project that has targeted economically depressed rural areas is the Rural Community College Initiative (RCCI).

As mentioned in chapter one, the Rural Community College Initiative was one of the first programs to promote collaboration and development for rural community colleges. RCCI began in the early 1990s by the Ford Foundation as a “national demonstration project to help community colleges in distressed regions move their people and communities toward prosperity” (Emery, 2008, vii). There were two key goals for the RCCI. The first goal was to promote economic development through job creation, raising incomes, creating wealth, and investing in businesses. The second major goal of RCCI was to increase access to education (Salant & Kane, 2007).

The RCCI has gone through two phases (Salant & Kane, 2007). The first phase began in 1994 and targeted specific geographical regions where communities were facing out-migration and declining economics (Eller et al, 1998). These geographical areas included the Southeast, South, Southwest, Appalachia, and western Indian reservations (Eller et al, 1998). The first

phase of the RCCI was managed by the Manpower Development Corporation (MDC), a non-profit organization located in North Carolina (Salant & Kane, 2007). The participating colleges in the first phase were encouraged to create economic development opportunities by providing workforce training, promoting technology transfer and competitiveness, supporting entrepreneurs and small businesses, and promoting a strong educational foundation (Eller et al, 1998). Overall, the RCCI found that there were several key challenges that were hindering these rural areas in their attempts at strengthening their economic development efforts: geographic and infrastructure challenges, poor social services, inadequate education, and regional dependency on state agencies, which have left the communities without civic capital unable to build a sustainable economy (Eller et al, 1998). As a result of these challenges, many rural community colleges found that the partnerships that they intended to create and sustain failed to be successful because of the limited resources and lack of civic agency in the community (Eller et al, 1998).

In 2002, the second phase of the RCCI moved from the management of the MDC to instead dividing efforts among several Regional Rural Development Centers (Salant & Kane, 2007). The Ford Foundation moved the management to regional centers in order to begin institutionalizing the RCCI and utilizing land-grant institutions as partners in working towards greater economic development within their regions (Emery, 2008). Land-grant institutions were brought into the second phase as a way to capitalize on resources, since RCCI was receiving less funding in the second phase than they did during the first phase. Additionally, land-grant institutions were viewed as critical partners in assisting in programming and other economic development efforts of the rural community colleges, who were participants of RCCI (Emery, 2008).

The second phase of the RCCI introduced a new goal that went beyond building institutional capacity and focused more on civic engagement within the community (Salant & Kane, 2007). Specifically, the second major goal of this phase was to utilize coaches who would help community colleges become agents of innovation in areas of economic development and civic involvement (Emery, 2008). Coaches were trained by the regional centers to develop programming within the community, build relationships between the community college they were coaching and the community, and work with all key stakeholders to establish goals and reasonable outcomes (Emery, 2008). Overall, the goal of the second phase of RCCI was to establish a strong partnership with land-grant institutions that could provide resources and programming for the community. Additionally, land-grant institutions were used to help community colleges focus more efforts on building civic agency so that economic development strategies could be sustained over time (Emery, 2008).

The results of the second phase were mixed with some successes and similar failures to phase one. Overall, it appears that the keys to success were collaboration, having an agreed-upon strategy, and supporting capacity building in businesses and education (Emery, 2008). More specifically, the Southern Rural Development Center found that having coaches assigned to each community college was helpful, but that it was not a critical factor leading to the success of RCCI. However, the role that land-grant universities played in developing community programming was found to be a critical partnership that helped sustain relationships over time (Salant & Kane, 2007).

Overall, the RCCI demonstrates one example of how community colleges can be seen by their local communities as engines of regional growth and development for many rural areas in the United States. There are many reports and publications about the RCCI and suggestions for

ways the program can be improved upon and possibly replicated in other areas of the country (Eller et al, 1998; Emery, 2008; Salant & Kane, 2007). These publications are a significant contribution to the literature on community colleges and economic development as the initiative was one of the first to specifically target rural areas.

Rural community colleges serve a great number of the students in the higher education system, yet very little is known about how these colleges participate in developing their local and regional communities. The RCCI was a first step towards building greater economic development strategies and improving economic development by utilizing the resources of the community college. However, there are still many barriers and challenges that need to be addressed in order to continue towards successful outcomes. Additionally, the RCCI was only targeting some regional areas, and there are certainly other rural communities within the U.S. that could benefit from similar programming.

One of the biggest lessons to be learned from RCCI is that partnerships between a college and community are critical to building relationships, establishing civic capital, and developing an economic development strategy. Community colleges play a critical role in many types of partnerships within their communities and regions, and their interactive capacity should not be overlooked. The next section will review literature on the role that partnerships play in connecting higher education institutions with their community.

Partnerships

Within the past decade, partnerships in higher education have become an increasingly popular topic in higher education research (Amey, 2007; Kisker & Carducci, 2003). Literature on partnerships covers multiple types of partnerships, including those between the following: higher education institutions and the K-12 sector (Amey, 2007), higher education institutions and

the private sector (Kisker & Carducci, 2003), higher education institutions and non-profit organizations, and higher education institutions and the government (Lisman, 2001). The literature on partnerships is diverse, yet there are a couple of types of partnerships that are discussed most consistently. These types of partnerships include service-learning partnerships between a campus and community (Bringle & Hatcher, 2002) and partnerships between higher education institutions and the K-12 sector (Amey, 2007).

Bringle and Hatcher (2002) describe many service-learning partnerships as campus-community partnerships. Campus-community partnerships are referred to as a series of interpersonal relationships between campus staff and community leaders, agency personnel, and members of the community (Bringle & Hatcher, 2002). Service-learning partnerships have become increasingly popular because there have been new funding opportunities provided by the federal government for such partnerships (Bringle & Hatcher, 2002; Leiderman, Furco, Zapf, & Goss, 2003), bringing them to the forefront of institutions' attention.

As public resources continue to decrease, community-based organizations are also seeking partnerships with higher education institutions in order to address important and complex social issues (Leiderman, Furco, Zapf, & Goss, 2003). One organization in this area that has seen a significant rise in membership is Campus Compact. Campus Compact has become a large organization that includes nearly 1,000 colleges as part of the national coalition (Leiderman, Furco, Zapf, & Goss, 2003). College presidents who are members of Campus Compact have goals of fulfilling a public purpose and seek to advance their institution's role in community engagement (Leiderman, Furco, Zapf, & Goss, 2003).

Another popular type of partnership that is often discussed in the literature are those between higher education institutions and the K-12 sector (Amey, 2007). Depending on the

region or state, higher education and K-12 partnerships can play a vital role in aiding in the transition of students from one sector of education to the next. For example, in one Midwestern district, a high school, community college, and postsecondary-education institution created a partnership to aid students in transitioning from high school to higher education (Watson, 2007). In this case the high school was newly built and designed to incorporate curriculum from the community college to help students become prepared for college level coursework before entering postsecondary education (Watson, 2007). Additionally, the partnership envisioned the high school as an educational hub for the community that all citizens could visit for lifelong learning opportunities, gym memberships, and community events (Watson, 2007). In this partnership, the goal was not to just help students transition through multiple sectors of education but to also welcome the community into this new educational environment.

Partnerships that extend beyond service-learning and higher education-K-12 do exist in practice; however, there is limited research on economic development partnerships with higher education institutions. Additionally, due to the newness of the Carnegie Classifications, the literature does not distinguish between the various sub-classifications of community colleges. This is an important gap in the literature and supports the purpose of this study. The next section will review current literature on the role that higher education institutions play in economic development.

Economic Development and Higher Education Literature

In the 21st century, one of the most important resources is knowledge (Florida, 1995; Lane & Johnstone, 2012). Utilizing knowledge as a resource that can be used as an economic catalyst for regions, states, and countries is an increasingly important topic in higher education. The use of knowledge in economic development is often referred to as the knowledge economy

(Lane, 2012; Meulemeester & Rochat, 1995; Powell & Snellman, 2004). The definition of knowledge economy provided by Powell and Snellman (2004) will be used in this study. Powell and Snellman (2004) define the knowledge economy as:

Production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence. The key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources (p. 199).

The growth in the knowledge economy throughout the past twenty years has sparked significant research on the role that knowledge is playing in economic development (Elliot, Levin, & Miesel, 1988; Lane, 2012; Trani & Holsworth, 2010). Knowledge and the continual creation of new knowledge is now being viewed as a valid resource that can be traded, transferred, and used to spark economic growth in communities, states, and countries (Lane & Johnstone, 2012).

Higher education institutions are viewed as a primary vehicle for knowledge creation.

Currently, over 40 percent of jobs require at least some college education in the United States (Kanter, 2011). Higher education institutions are perhaps the biggest creators of knowledge among the young-adult population and play a key role in increasing knowledge at both a scholarly level and technical level.

Gais and Wright (2012) categorize the role higher education institutions play in economic development as the colleges serving as: (a) economic units, (b) developers of human capital, (c) engines of innovation in research and development, (d) sources of business assistance, and (e) resources for community vitality. Higher education institutions have a much greater impact on the community and local region than simply supplying graduates that have the potential to earn more money. Gais and Wright (2012) argue that higher education institutions serve their

communities through knowledge creation, training workers, bringing academic and applied research to the community, supporting local businesses, and being a continual resource for the community in whatever way is needed. How to go about the task of measuring how these actions are directly impacting the community is highly contested throughout the literature.

Scholars continue to work on ways to measure the impact higher education institutions are having on economic growth. The Gross Domestic Product (GDP) statistic is one of the most common measures of economic development. The GDP is calculated using the output of goods and services produced in the United States (U.S. Department of Commerce, 2013). There are many economists who have worked to develop input-output measurements that track the amount of resources institutions are investing in each student and then calculate what the rate of return is on that student, post-graduation, to the GDP (Krueger & Lindahl, 2000). DeMeulemeester & Rochat (1995) conducted a quantitative study to examine if higher education was having a positive impact on several developed countries' GDP. Their results indicated that higher education investment has a positive impact on the GDP in countries that had institutions with curriculum that was designed to promote economic development and provided students with knowledge that was applicable in the job market (De Meulemeester & Rochat, 1995).

Specifically, countries in the study that were able to transform the enrollment of students into professional careers, such as teaching, medicine, law, economics, and engineering, had greater growth in the economy. These professions can contribute to the economy through the transfer of knowledge, the maintenance of mental health of the country, the provision of social justice, and the creation of entrepreneurs. However, an overabundance of graduates in one of these fields could lead to saturation and negatively impact the economic prosperity of a country (De Meulemeester & Rochat, 1995). Another important finding of the study was that a country must

have its social, political, and economic structures aligned with technological advances that allow students to use their newly acquired knowledge and apply their skills in the job market. In summary, this study showed that content of curriculum and process of delivering the knowledge is a key factor in how higher education impacts economic development (De Meulemeester & Rochat, 1995).

Just as higher education can advance economic growth for a community, there is also an economic risk of not investing in higher education. One study estimated that the cohort of college students who started a degree in 2002 but did not obtain a degree within six years cost the nation \$3.8 billion in lost income, \$566 million in lost federal income taxes, and \$164 million in lost state income taxes (Schneider & Yin, 2011). This study goes further to project lost income over a longer period of time, and is estimated that over a 45-year working career, this same cohort of students who did not complete a bachelor degree will have cost \$158 billion in lost income, \$32 billion in lost federal income tax, and \$7 billion in lost state income tax. This study highlights the economic impact of not educating just one cohort of students. Because universities can impact the economy in both positive and negative ways, they must be able to understand their complicated role in economic development in order to be effective.

The role that higher education plays as a catalyst for economic development, both regionally and internationally, has become increasingly important, especially in the aftermath of the recession of 2008. In order to capitalize on the impact higher education can have on a community, each institution must develop strategic plans to ensure economic growth in specific areas that will help their specific region (Moussouris, 1998; Phelps, 2012). Institutions and their surrounding communities are now attempting to determine how to manage the economic

development opportunities that are presented by higher education institutions in order to advance their local economies and job markets (Moussouris, 1998).

Many quantitative studies that use an input-output method to measure the impact of higher education on economic development fall short of capturing the full story (Gais & Wright, 2012). Colleges and universities often have a diverse set of programs that are geared towards improving their community's economic development that may not be easily measured in dollars-in versus dollars-out (Gaist & Wright, 2012). For example, one of the key functions of higher education institutions is to develop human capital through knowledge dissemination, however, for most institutions this means developing human capital in students so that they leave the institution and go work in a different region/community (Gais & Wright, 2012). The college is then unable to measure their direct economic impact due to the fact that many students will leave the region after graduation (Gais & Wright, 2012).

Aside from quantitative measures, such as using the GDP and other statistics to determine the impact of higher education on salaries and job placement, there are only a few scholars who have begun to explore more qualitative approaches to understanding the economic impact of higher education. Miller and Tuttle (2007) designed a qualitative study that explored how rural community colleges serve as social engines for their rural communities and how these colleges positively influence the self-identity of their community and the residents (Miller & Tuttle, 2007). Rural community colleges often serve as the only main social engine for a community, especially rural farming communities with limited resources and few social engines in the region (Miller & Tuttle, 2007). A case study was used to describe how rural community colleges assist individuals in determining their self-identity and the identity of their community (Miller &

Tuttle, 2007). Three rural community colleges were selected for the study, and 79 interviews were conducted throughout all three colleges.

Four themes emerged throughout the data collection: community inclusiveness, community pride, the value-added community, and town-defining colleges (Miller & Tuttle, 2007). First, community inclusiveness was found throughout all three colleges through community members utilizing the college's resources and facilities. In particular, staff members viewed the college President's involvement in many community projects essential to creating an inclusive environment. Second, community pride in the community college was also an important theme. Having residents feel proud of the college that resided within their community was a key way of establishing strong relationships between the college and community. Third, value-added community referred to comments that were made by many individuals about how their life in a rural community was made better by the college. Additionally, students noted they felt good about their quality of life having grown up in a town with a community college. Lastly, town-defining describes how individuals felt about having the college in the town. Many students, faculty, and residents noted throughout the interviews that they identified their home as the home of the college and placed great emphasis on the college's influence of the town's identity (Miller & Tuttle, 2007).

Miller and Tuttle (2007) also found that the government's investment in an individual and the willingness to develop the individual holistically will improve the quality of life for that individual and will lead to economic improvements for the region over time. The study provides two key implications for policy makers: (a) social programs and increasing an individual's sense of self-worth should precede economic development activities and (b) building relationships with key stakeholders outside the community college is critical to sustaining and creating partnerships

with businesses and other agencies (Miller & Tuttle, 2007). Based on the findings, the study proposed that economic development couldn't be effective unless the individual has self-worth and motivation to be successful as a contributing member of society.

The type of economic development that higher education institutions engage in can vary depending on the type of institution, geographic location, and available resources. For example, one of the more significant ways that research institutions contribute to the region's economic development is through extensive research. However, community colleges do not have such opportunities, although they do possess others. The next section will present some ways in which community colleges are engaging in economic development strategies for their community and region.

Economic Development and Community Colleges

With the shift toward the knowledge economy and greater emphasis being placed on knowledge and innovation over technical skills, community colleges have also begun to shift their economic development efforts (Trani & Holsworth, 2010). Many community colleges have moved their focus from training workers to perform a particular set of skills needed in the workplace towards a more robust set of economic development strategies (Jacobs, 2012). In 2008 the United States experienced the beginning of a significant recession. For many communities this meant high unemployment rates and a significant amount of displaced workers (Jacobs, 2012). Community colleges began to respond to needs of the community by developing programs that would help preserve jobs in the region and increase their economic development efforts within the community (Jacobs, 2012). As a result, community colleges' economic development efforts have become increasingly focused on workforce development (Trani &

Holsworth, 2010). The American Association of Community Colleges (1993) defines workforce development as such:

...those activities designed to improve the competencies and skills of current or new employees of business, industry, labor, and government. Such training is typically provided on a contract basis with the employer who defines the objectives of the employee training, the schedule and duration of the training, the location at or the delivery mechanism by which the training is provided, and, often, the competencies of the trainer. Workforce training is customer-driven, involves payment by the customer to the training entity, and is usually linked to some economic development strategy of the employer. (p 1).

Community colleges are well suited to provide workforce development due to their close proximity to the community and open access and the fact that they have faculty equipped to provide both technical and academic training (Jacobs, 2012). For example, Macomb Community College (MCC) in Michigan developed a workforce development program just shortly after the auto industries laid off a significant number of employees during the economic recession in 2008 that retrained auto body specialists to learn the new technologies of lexicon and techniques of pipe design, which are needed in oil refineries (Jacobs, 2012). With funding assistance from the federal government, Macomb was able to take 25 displaced autoworkers and retrain them in these new skills. Many of the graduates of the program were able to relocate and get jobs in New Mexico and Texas. However, it is important to note that the overall goal of the program was not to have those individuals leave Detroit, but rather to attract design work to the region and retrain workers in new technologies (Jacobs, 2012). Although this program was extremely small in scale compared to the thousands of workers that were displaced, it provides an example

of what community colleges are doing in order to assist displaced workers. When trying to address this goal locally, each college may have to think differently given their size and available resources when developing such programs.

An example of a workforce development program that focused on a broader region than one community college is the Shifting Gears Initiative. In 2007, the Joyce Foundation started The Shifting Gears Initiative, which sought to increase the amount of workers in the Midwest that had earned credentials that would be valuable to employers in the local markets (Bragg, Dresser, Smith, 2012). A study was conducted to examine the role of the Shifting Gears program, and more specifically the role that bridge programs play in better supporting adult learners. Bridge programs are: what? The study also utilized data from various cases to analyze the number of adults in the Midwest who earned additional credentials after certain programs had been implemented. The Shifting Gears project found that bridge programs designed more towards the needs of the state's students were much more successful. For example, in Illinois, community colleges developed three new models of bridge programs: English-as-Second-Language, The Incumbent Worker Training Model, and the Hybrid model, which combines adult learning and development education strategies (Bragg, Dresser, & Smith, 2012). These three bridge programs provided individuals with the opportunity to receive education and or training designed for their specific needs. Throughout all of the states involved in the project, students that were engaged in a bridge program completed college at a higher rate than the same type of students who were not in bridge programs (Bragg, Dresser, & Smith, 2012).

Braggs, Dresser, and Smith (2012) note that the Shifting Gears project was successful due to a combination of funding assistance from the Joyce Foundation, federal stimulus dollars, and other financial resources to implement these new bridge programs. Additionally, choosing a

region with a high number of low-skilled workers and placing these workers in programs that could train them in new skills that were needed in the area was another cause of success (Braggs, Dresser, and Smith, 2012). The increase in adults who completed the bridge program and earned a credential was attributed to the targeted programming designed specifically for adult learners who either never attended postsecondary education or who might need to be retrained. This targeted approach allowed the bridge programs to help adults ease into college-level work and assist them in learning new skills. Although each state within Shifting Gears had different goals in terms of what type of adults they targeted as participants, they all saw improvement in the amount of adults and low-skilled workers who completed a bridge program and earned a new credential (Braggs, Dresser, and Smith, 2012).

In addition to workforce development efforts, Jacobs (2012) suggests that community colleges have developed economic development strategies in four distinct areas: preparing high-skilled technicians for innovative work, creating entrepreneurial programs, serving as business incubator for new start-up companies, and engaging with applied research projects. These additional economic development strategies have grown significantly among community colleges since the recession in 2008 (Jacobs, 2012). Scholars are still learning how such economic development strategies may be impacting community colleges and their surrounding communities.

In summary, the literature has provided a foundation for this study in first outlining the role that community colleges have played and continue to play within the United States, by determining how they are classified, and by identifying the importance that geographical location can play in developing the role of a community college. Second, the literature has demonstrated how the knowledge economy is putting new pressures on community colleges to fill the skills

gap and increase graduation rates so that the United States can once again be the country with the most-educated population. Third, the literature reviewed the development of different kinds of partnerships that are utilized in order to help the college: (a) transition students from high school to college, (b) contribute to community development, and (c) transition students to a four-year institution. Finally, the literature has highlighted the role that higher education institutions are taking in contributing to economic development strategies for their local community, region, and state.

Implications and Gaps in the Literature

The literature highlights three main points: (a) community colleges enroll a large percentage of higher education students and serve a critical role in communities to assist adult learners and displaced workers in getting new training to enter the workforce, (b) partnerships between higher education institutions and local community organizations can play an important role in various types of community development, and (c) higher education institutions can play an important role in economic development when there is a strategy in place. Overall, the literature review suggests that economic development in higher education occurs when the community invests in individuals and partners with a higher education institution to ensure long-term strategies for lifelong learning and economic advancement (Phelps, 2012).

Given what the literature has presented, there are some gaps that are not addressed in current research. First, although research highlights the important role community colleges play in educating a large percentage of students, there is limited research that distinguishes between rural, suburban, and urban community colleges. These classifications were made in 2005, and there have not been any studies comparing the various regional contexts of community colleges in the intervening years. This leaves a significant gap in the literature, as the way rural,

suburban, and urban colleges operate may be vastly different, and they may experience different challenges from those currently presented in the literature on community colleges.

The second major gap in the literature is the identification of the key stakeholders that work with community colleges. While there is significant research identifying the types of partnerships (i.e., civic engagement and economic development), there is little known about what types of community or government organizations work closely with community colleges. For example, we do not know if there are there consistent organizations throughout the country that are key partners for civic engagement and economic development or if the partners are different for each college. This study identified the key stakeholders that are partnered with the case site in an effort to begin remedying that lack of knowledge. While this study cannot identify organizations that connect with community college across the country, it could serve as a model for future researchers to identify the key stakeholders that partner with particular community colleges. This is an important question that is not currently answered in the literature. Knowing what types of organizations are partnering with community colleges and which organizations successfully improve the surrounding community through that partnership could assist other community colleges in developing strong partnerships.

The third major gap in the literature is in our ability to understand how community colleges impact the local and regional economic development of their communities. The literature on the role community colleges play in impacting economic development for their communities focuses primarily on workforce development. While workforce development can and does impact economic development by providing training to individuals so they are better qualified for jobs, there are many other aspects of economic development. Exploring the other avenues community colleges have explored in order to improve economic development

opportunities for their local communities has not been examined in the literature and is a significant gap.

Conceptual Framework

Much of the literature on economic development in higher education uses the concept of human capital to describe how the investment in education can improve an individuals' earning potential and provide long-term indirect benefit for a region, state, and country (Becker, 1993; McMahon, 2009). Additionally, regional administrators have begun to realize that in order for their communities to prosper in the future, they must invest in both social and human capital (Longworth, 2006). This recent development of increased interest in social and human capital is largely sparked by globalization and the knowledge economy (Longworth, 2006). A new concept that is emerging along with the investment in human capital is the learning region. A learning region combines concepts of interconnectedness, innovation, and lifelong learning as a way to advance a region both economically and socially (Longworth, 2006). For this reason, the learning region, combined with the concept of human capital, guided this study. This section will first review the concepts of human capital and the learning region. This section will then combine these concepts into a proposed conceptual framework for the current study.

Human Capital

Human capital is often defined as the investment in education or training that may have an impact on one's economic wellbeing (Becker, 1962). One of the founders of human capital theory, Gary Becker (1993), states that education and training are the most important investments in human capital. Additionally, Becker's main contribution to human capital theory was focused on the investment in higher education for the individual and the rate of return on a college education versus a high school education (Sweetland, 1996). Becker projects that if a

community invests in higher education for an individual, then that individual will earn a greater income, which will lead to long-term economic gain for the community (Becker, 1993).

In the past decade there have been new approaches to the concept of human capital that extend beyond Becker's original definition. Florida, Mellander, and Stolarich (2008) suggest that human capital has evolved to go beyond educational attainment. They suggest that human capital must also include characteristics such as innovativeness, creativity, entrepreneurial prowess, and accumulated experience (Florida, Mellander, & Stolarich, 2008). Florida (2002) notes that creativity is a new source of economic growth and that advances in this area are ultimately resulting in the creation of a Creative Class. The Creative Class is defined as a new group of individuals that utilize creativity and innovation to create economic gain for society (Florida, 2002).

Mr. Powers McMahon also has an updated approach to human capital. McMahon (2009) adds that human capital is more than just investing in education; it is also investing in any non-market attributes of an individual. These non-market attributes can be better health, greater happiness, and a sense of civic duty (McMahon, 2009). McMahon argues that traditional ways of calculating the economic impact of higher education are narrowly focused on income that a person receives as a result of higher education, and does not take into account the social aspects of that person's involvement in the community.

Within the past two decades, there has been significant research on how globalization and the knowledge economy are creating a generation of innovation that is more focused on knowledge and creativity than simply training individuals on a physical skill (Florida, 1995; Gais & Wright, 2012). As a result, more and more scholars are beginning to discuss the convergence of innovation and economic development (Gais & Wright, 2012; Morgan, 1997). Richard

Florida (1995) is one of the leading scholars discussing the role of creativity and innovation in economic development. Specifically, Florida suggests that the knowledge economy is shifting its expression of capitalism to be a knowledge-intensive capitalism in which the human mind is the main source of value (Florida, 1995). This shift in thinking about human capital from purely a return on investment in education towards a combination of education, creativity, and innovation is critical when considering work that focuses on the role of higher education in economic development in the 21st century.

Learning Region

In addition to human capital and the growing literature on innovation and the knowledge economy, the concept of a learning region is beginning to guide many cities in how they plan for economic development and how they adapt to the needs of the knowledge economy (Longworth, 2006). The concept of a learning region has been around in some developing countries since the 1980s and is becoming a world-wide phenomenon (UNESCO, 2012). Cities and communities that are seeking to develop a learning region or learning city see it as an opportunity to integrate education/lifelong learning within community and economic development strategies (Christopherson & Clark, 2010).

The definition of a learning region has been well discussed in the literature. Some scholars suggest that a learning region is simply a geographical area in which lifelong learning occurs (Linguist, 2005). Other scholars have much more complex definitions. One definition provided by the European Lifelong Learning Initiative states:

A learning city, town or region goes beyond its statutory duty to provide education and training for those who require it and instead creates a vibrant, participative, culturally aware, and economically buoyant human environment through the provision, justification

and active promotion of learning opportunities to enhance the potential of all its citizens (Longworth, p 23,2006).

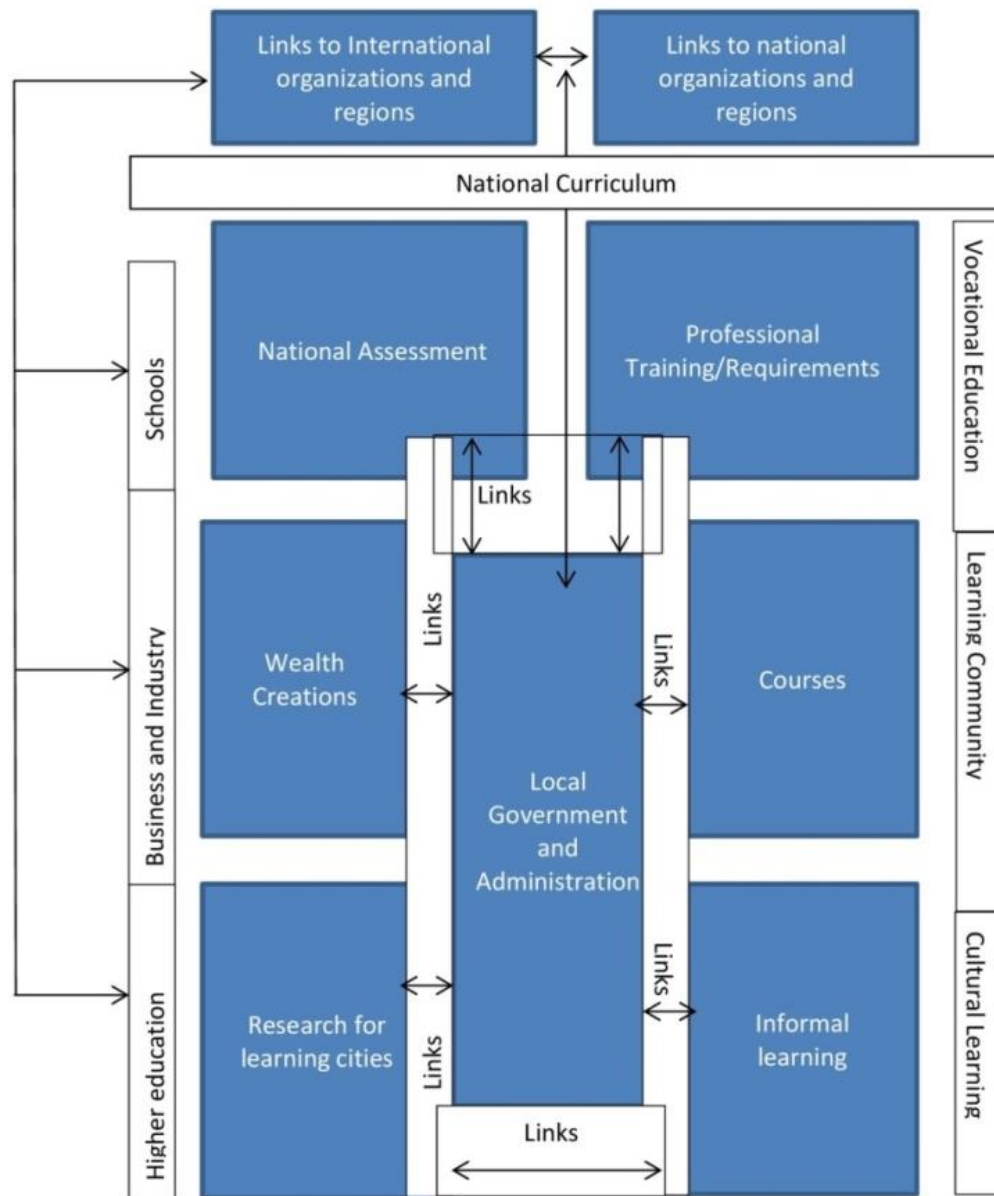
Unlike the simplicity of the first definition, the European Lifelong Learning Initiative's definition combines notions of lifelong learning, economic development, collaboration, cultural enrichment, and improving the social and human capital of all citizens. For the purposes of this study, the definition provided by the European Lifelong Learning Initiative will be used as it provides a more detailed description of concepts that are conducive to the development of a learning region. These concepts include: creating cultural awareness, fostering civic engagement, providing educational opportunities, and furthering the economic opportunities of a region.

While the term "learning region" is not commonly used in the U.S, the concept is seen in action throughout many cities and regions. Many regional and educational leaders are calling for a shift from "an age of education and training" towards an all-encompassing era of lifelong learning (Longworth, 2006). Longworth (2006) describes this shift as the continual fulfillment of everyone's human potential, which will improve human capital, which will in turn have long-term economic benefits for the community. Longworth explains further that the investment in human capital will also lead to growth in social capital for the region and the community. Furthermore, one of the key scholars of the learning region concept, Richard Florida, suggests that regions are becoming a focal point for knowledge creation in the new global economy (Florida, 1995). Florida also suggests that there is a new age of capitalism that replaces physical labor as a main source of value with human intelligence (Florida, 1995). Investing in a community by promoting lifelong learning will be critical for communities to be successful in the knowledge economy and is one of the main characteristics of a learning region.

Norman Longworth (2006) presents a model for a learning region that highlights the connections between all the stakeholders (an adaptation of this model from *Learning Cities, Learning Regions, Learning Communities*, 2006, pg. 107 is presented below in Figure 1).

Although the model looks complex at first glance, the most important concept to understand is that all the stakeholders are linked to each other in some capacity. It is also important to note that Longworth's model is based on countries in the European Union (primarily the United Kingdom) that have a national curriculum. This means all of the stakeholders within the region are also connected to the national curriculum as every stakeholder works together to achieve common community goals.

Figure 1: Adaptation of Longworth's Learning Region Model



The learning region framework has many characteristics, especially when using a more complex definition such as the European Lifelong Learning Initiative. However, throughout the literature there are three key characteristics of the framework that consistently appear: lifelong learning opportunities (Waters, 2007), interconnectedness of citizens with their community

(Longworth, 2006), and linking economic and social development to education (Florida, 2002; Powers, 2007). These three characteristics are used as a guide for this study.

The first characteristic of a learning region is the interconnectedness of various stakeholders in a region. For example, a learning region connects all forms of education, businesses, and cultural enrichment activities to the local or regional government through shared goals of furthering the region both economically and in terms of human development (Longworth, 2006). Another important component of interconnectedness in a learning region is that the linkages between the stakeholders eventually lead to both national and international organizations. This ultimate link ensures that the learning region is competitive in the global economy and does not remain stagnant but rather continually changes and adapts to remain competitive (Longworth, 2006).

A second key characteristic of a learning region is lifelong learning. Lifelong learning in the context of a learning region means continual education throughout life either through formal or informal education opportunities (Longworth, 2006). Perhaps most important is the notion that informal learning takes place throughout one's entire life. This can be seen through cultural activities, workshops or lectures, and other informal events that a community sponsors for all ages.

The third key characteristic used to help guide this study is economic development. A learning region utilizes its stakeholders in order to promote economic development for the region. This characteristic connects well with interconnectedness and lifelong learning as the literature suggests that if a region invests in individuals through lifelong learning and collaborates with key stakeholders, then there will be economic benefits for that community (Florida, 2002).

Overall, a learning region must be able to conceptualize how to develop their community socially and economically and to understand how they are connected. A community that adopts the concepts of a learning region will have strategic plans for educational growth and economic development that are continually changing to meet the needs of the community and to stay competitive internationally (Longworth, 2006).

Unfortunately, Longworth's model cannot be easily translated to the U.S. for two main reasons. First, it cannot be assumed that the local government serves as the central agency connecting all the key stakeholders in the community. In the United States, there is no national curriculum that controls the curriculum at the secondary and postsecondary education levels in the United States. Rather, the U.S. operates in an extremely decentralized model, especially in the education system (Spellings, 2005). In some states, K-12 and higher education are more closely connected. For example, the state of Texas has a state system that connects K-12 and higher education through a P-16 Council. The P-16 Council's job is to ensure a long-term plan for education throughout the state of Texas for students from kindergarten through college (Texas Education Agency, 2013). Other states have a much more decentralized education system. For the purposes of this study, all sectors of education are assumed to be separate entities that are not automatically linked together.

The second major issue in translating Longworth's model to the U.S. context is the implied definition of each stakeholder group. For example, Longworth's definition of and understanding of cultural education is likely to be different from the definition and understanding of those same entities in the context of the U.S. For this reason, it is essential that a new model be created that accounts for the U.S. context and clearly defines each stakeholder group. Additionally, Longworth's main stakeholder groups may not be transferrable in the U.S. context

given that learning regions/communities are not widely discussed. Longworth's model also relies on a great deal of links between stakeholder groups that seem to be inherent in the region's cultural makeup. Those links are not necessarily transferrable to the U.S., and more specifically, they are not necessarily transferrable to a rural area within the U.S., which is why examining to what extent there are links between stakeholders in rural communities is an important aspect of this study.

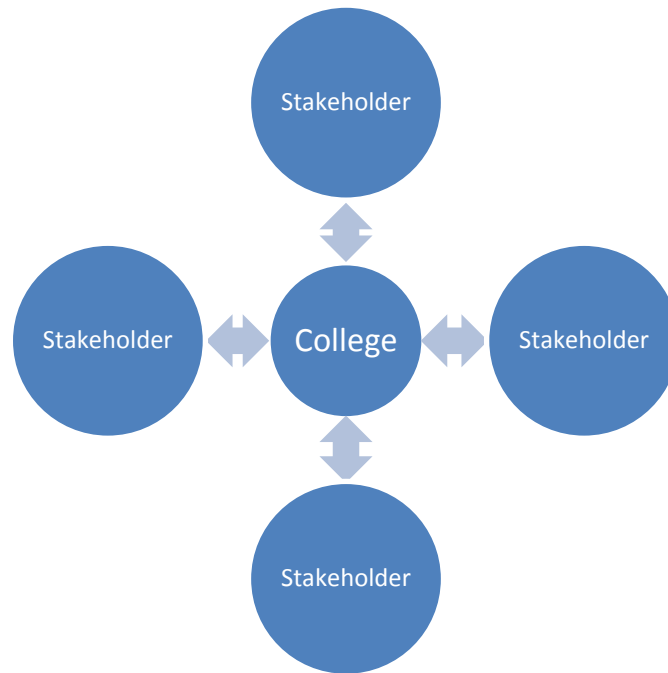
For this reason, the proposed model (see Figure 2) for this study places the college as the central agency connecting community stakeholders together. The literature also supports the notion that colleges are being looked at by communities as a main stakeholder that can promote economic development for a region.

This study utilized the learning region concept as a way to help understand who key stakeholders are for a rural community college and whether the characteristics outlined by the learning region framework are present within the case study. Figure 2, as mentioned, shows a possible template for this study that uses the college as the central agency, bringing together key stakeholders in the community. The model also uses arrows as a way to symbolize the college's interconnectedness to each stakeholder. Given that this study focused solely on one rural community college, it is important to note that not all aspects of the original learning region model can be refined. For this reason, I have simplified the model to showcase how the research questions will guide this study. Given that the literature does not identify which stakeholders are most important to a community college, the first research question will seek to learn who the stakeholders are that work most closely with the college. The second research question for this study seeks to understand if and to what extent the three main characteristics of a learning region are present in the relationship between the college and community. Figure 2 represents this

process. There may be more or less stakeholders depending on the findings. The center box is the community college identified as the case site for this study, Northern Community College (NCC). How NCC is connected to the main stakeholders is the second research question for this study. Depending on how interconnected NCC is to the main stakeholders, arrows will be drawn to show their connection. This may mean that NCC and the main stakeholders have a mutually beneficial relationship, which would be symbolized with an arrow at each end of the connection. If the study finds that some of the relationships are not mutually beneficial, then an arrow may only be one-directional.

Although the literature suggests that relationships (interconnectedness), economic development partnerships, and a commitment to lifelong learning are all characteristics of a learning region, since the concept of a learning region has not been examined in a U.S. context, beginning with a simplified model will assist in identifying what a learning region might look like in the U.S. The goal of this study is to learn how one rural community college connects with their local community and whether or not there are characteristics of a learning region within that relationship.

Figure 2: Sample Model for Study



In conclusion, this study seeks to understand to what extent the concepts of a learning region as outlined by Longworth are present within the community college selected for this study, Northern Community College (NCC). This study uses the characteristics of interconnectedness, lifelong learning, and a focus on economic development to examine if they exist within NCC and the local region. The findings of this study will assist in refining the model further and will offer suggestions for future research to test the revised model.

Chapter 3: Methodology

This study seeks to examine the ways in which one rural community college is connected to its local community. A qualitative case study approach has been selected for this study in order to learn who the key stakeholders are for NCC and to what extent aspects of a learning region are present in the relationship between a rural community college and its community. Merriam (2002) describes a case study as an intense description of a phenomenon or a social unit (individual, group, institution, or community). Additionally, Merriam (2002) states, “by concentrating upon a single phenomenon or entity (the case), this approach seeks to describe the phenomenon in depth. The unit of analysis, not the topic of investigation, characterizes a case study” (pg. 8). Single case studies can include either one unit of analysis (holistic) or multiple units of analysis (embedded) (Yin, 2009). This case study has one unit of analysis, Northern Community College.

A constructivist lens has been applied to the study. Constructivism is the belief that realities are created through individual experiences, are context specific, and that multiple realities can exist at the same time (Lincoln & Guba, 1994). Constructivism is also referred to as relativist ontology because the research is based on the interpretation of the participant and the researcher (Stake, 1995). The constructivist paradigm is appropriate for this study because data collection was largely based on participants’ personal experiences with the college. Data sources in this study are interviews with college leaders, observations of meetings with college stakeholders, document review of newspaper articles and other college and community publications, and a sample of interviews with business owners randomly selected from the community. These data were analyzed in order to develop an understanding about how key

stakeholders make meaning of their role in the development of a learning region and economic development.

Case study designs are beneficial to use when attempting to understand the impact a case has on its social context, political context, and a variety of other contexts (Stake, 2004). Case studies are often used in new and exploratory lines of research. There is only limited research on the role of rural community colleges in economic development and even less literature addresses the concept of a learning region. Hence, a case study is well suited for this study because case studies are best used when exploring a new process or behavior (Meyer, 2001). This study is well suited to be a case study as it seeks to understand the social impact that a rural community college has on its local region. The objectives of this study are limited to only beginning to understand what learning region characteristics are present between a rural community college and the local community. Additionally, case studies are not well suited to understand other cases, so the primary obligation is to first understand the case at hand (Stake, 1995). In other words, the aim of this study is to begin to understand how rural community colleges engage with key stakeholders throughout the community so that more research can be done to see if there are trends in how partnerships operate with rural community colleges.

A single case study design is often used to examine a rare or unique case and also for exploratory studies (Yin, 2009). Given that previous research has not focused on the role of rural community college in developing a learning region and economic development there, this case study was exploratory. Single case studies can also be beneficial in theory development. This study was one of the first of its kind to focus on rural community colleges given that the sub-classifications were only recently developed by the Carnegie Foundation in 2005. The findings from this study are intended to provide important information for future research to examine the

role that rural community colleges play in developing their local communities. Finally, the finding of this study could assist other rural community colleges as they develop economic development strategies with their local community.

This chapter will explain the methodological approach for this study. First, I will review the research questions and conceptual framework. Second, I will introduce the case site. Third, I will present the data collection process and the development of the interview instrument. Next, I will outline the analytical strategy. Finally, I will address issues of trustworthiness and limitations of the study.

Research Questions

To review, this research study was guided by the following questions:

1. What are the links between a rural community college and the local community?
2. To what extent are aspects of a learning region (i.e. linkages between key stakeholders, a belief in lifelong learning, investment in individuals and community, and a focus on economic development) present in the relationship between a rural community college and the community?

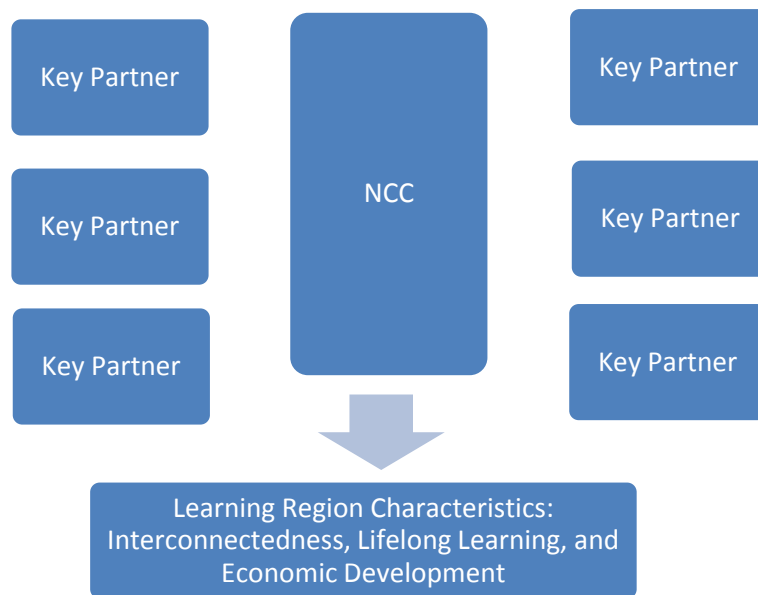
Conceptual Framework

As outlined in Chapter 2, the key concepts that guided this study were human capital and the learning region. Both the concepts of human capital and the learning region suggest that investing in an individual's educational development will create long-term gain for the region and community (Becker, 1993; Longworth, 2006). The concept of a learning region further suggests that a community's investment in an individual must occur in an interconnected way to ensure that all stakeholders in the community are responsible for the continual development of its citizens in both formal and informal education opportunities (Longworth, 2006). This study

sought out to understand what key characteristics of a learning region were found, if any, within the relationship between a rural community college and the local community.

Figure 3 shows the proposed model based on Longworth's original learning region framework. NCC is located in the middle of the model and is surrounded by key partners. The study identified which key partners NCC works with closely and how they are connected (i.e. if there is a mutual relationship or if one partner contributes more than the other). Additionally, the study sought to learn how NCC views its role in economic development. The box located underneath the stakeholder group signifies how NCC views its role in economic development. Chapters 4 and 5 of this study complete this model, filling in who the key partners are, what attributes of a learning region are present, and what economic development means for the college. Figure 3 is intended as a starting point for re-working Longworth's original model.

Figure 3: Conceptual Representation for this Study



Case Site Selection

The site selected for this study was Northern Community College (NCC), which is located in a Great Lakes state. NCC is classified by the Carnegie Foundation as a medium rural community college. NCC enrolls approximately 2,800 students. The college is located in a rural area and has two branch campuses that service four counties in the region. NCC offers 24 associate programs, 38 certificate programs, and a variety of non-credit job skills training programs and courses. Additionally, NCC has partnerships with six large four-year universities within its state that are designed to help students make a successful transition from their associate's degree to a four-year program. NCC's mission states, "We provide educational, economic, and cultural opportunities for student learning, personal growth and community improvement." NCC's mission highlights three core principles of the learning region and human capital: (a) access to educational opportunities, (b) a focus on economic development, and (c) enhancement of the community via individual development. NCC's inclusion of these core principles in its mission statement make it an appropriate site for this study.

NCC's main campus is located in a rural community with just under 6,000 residents living within the city limits. The city has a large tourism industry throughout the summer and is referred to as a "quaint resort community." In addition to a large tourism industry, the region also has industries in wine making, logging, and commercial fishing. There are only a few manufacturing companies currently operating in the area. The county in which NCC operates has fewer than 33,000 residents (U.S. Census, 2013). The four counties that NCC services have about 116,000 residents combined. In addition, the region covers an area of over 2,000 square miles (U.S. Census, 2013), which is an area slightly larger than the state of Delaware. Unlike urban and suburban community colleges, rural community colleges cover regions that cover

multiple counties and can stretch for several hundred miles. NCC also has two branch campuses, one at Midwest City and another at Lake View City. Both campuses are about an hour away by car from NCC's main campus; Midwest City is directly east of NCC, and Lake View City is located southeast of NCC.

Northern Community College has been in a long-standing economic development partnership with several other types of organizations for over 20 years. The Great Lakes Economic Coalition (GLEC) is a non-profit economic development partnership providing resources to create and retain quality jobs in the four surrounding counties. GLEC has five core partners: one four-year institution, one community college (NCC), a regional governing council, a state economic development agency, and the local K-12 school district. These five core partners represent a diverse mix of entities including educational, economic development, and state and regional, which aligns with the core concept of interconnectedness among a community from the learning region model.

The site for this case study was selected for several reasons. First, there is a gap in understanding how non-urban and suburban community colleges address challenges of enrollment, retention, connecting with the local community, and maintaining or increasing funding. A rural community college is a good fit for this study in order to begin to fill the gap in the literature that primarily focuses on urban and suburban community colleges. NCC was chosen for this study because of its long history and commitment to economic development for the region through partnerships and other programs. Also, NCC's mission highlights important concepts found within the conceptual framework, which will aid in answering the research questions for this study.

Another important reason that this study will focus on a rural area in a Midwest state is because of my personal connection to the topic at hand. Given that I have grown up in a rural community in the Midwest, I was drawn to this region in particular, as it has always been an important part of my life. Having worked at a different rural community college in the region, I learned quickly that the challenges my college faced were extremely different than the challenges that are so commonly described throughout literature on community colleges. I recognize that my personal experiences could be a potential limitation and could cause bias in my analysis; however, I took several steps to ensure credibility that will be described in a later section.

Data Collection

There were four sources of data for this study: interviews, observations, document review, and a sample of business owners that were randomly selected. First, interviews with key stakeholders at NCC, community members, and representatives from other community, regional, and state organizations were conducted. In case studies, interviews are designed to be more of a structured conversation than a direct line of inquiry (Yin, 2009), as is the case in this study. In-depth interviews were conducted for this study. An in-depth interview is important as it gives the researcher the opportunity to both seek out answers to questions and also ask the respondent to provide insight into the case (Yin, 2009). In-depth interviews also allow the respondent to expand their role and become an informant leading the researcher to other potential interviewees and lines of questions (Yin, 2009).

In order to learn what aspects of a learning region were present among NCC and the community stakeholders, it was important to draft interview questions that would allow participants to discuss not only their role at the college or in the community, but to also describe

who they partner with and how projects get completed. Interview questions were developed with this strategy in mind. In order to learn how NCC worked with other community organizations, the study utilized a recent cross-sector partnership project as a topic for participants to discuss during the interviews. This project, known as the mobile Fabrication Lab or “Fab Lab,” allowed the participants to describe how the college engaged with other businesses and organizations and what types of challenges they had to overcome to get the Fab Lab started. The Fab Lab is a \$300,000 mobile trailer that NCC has developed and brought to the community after over a year of work. The Fab Lab was in the final stages of development during the time of data collection. The project also has the potential for significant economic development implications if it is successful. The Fab Lab project provided an opportunity to draft interview questions that helped to answer the second research question in learning how college leaders view their role in economic development. The Fab Lab serves as an important tool to evaluate economic development for NCC because the project required significant collaboration with many different community stakeholders and industry leaders. Industry leaders played a crucial part in the planning of the Fab Lab because funding for the lab would only be secured if local manufacturers hired 30 new employees that had been trained in the Fab Lab.

Second, observations of meetings about the Fab Lab and meetings with community leaders aided in gaining insight into how NCC interacted with other businesses and organizations. Observing these meetings also aided in conceptualizing how the community was connected, who the key players at the table were, and how economic development fit into the region and college’s community strategies. Observation is often used in case study research to aid the researcher in describing the setting, behaviors, and events (Maxwell, 2013). Maxwell (2013) suggests that observations can allow the researcher to draw inferences about a person’s

perspective that one couldn't necessarily obtain from an interview alone. During the observations, my role as a researcher was primarily to observe and not participate in any activities or discussions that were occurring. Four key meetings were observed: a meeting with a local Economic Development group at a branch campus location, a Rotary Club meeting, a meeting with the City Manager at a branch campus location, and a stakeholder meeting for the Fab Lab. Details about each observation can be found in Appendix A.

Documents were the third type of data that I collected as part of this study. Newspaper articles and other publications produced by the GLEC and NCC were reviewed as part of the data-collection process. I collected documents when I visited various offices while conducting interviews. Some participants provided me with program brochures, newspaper articles, and other important documents relevant to this study. Additionally, I did a search online for other documents that might be relevant to include in the study, which resulted in mostly newspaper articles and public comments on those articles. GLEC has several publications, such as annual reports, President's reports, newsletters, and entrepreneurial activity reports that were reviewed as part of the data collection process. Below is an inventory of the documents used for this study.

Table 1: Document Review List

NCC Documents	Newspaper Articles	GLEC Publications	ISD Publications
Press Release about a new Business program	Article about ISD's summer welding program	2012 Annual Activities Report	Summer 2013 Newsletter
Fall workshop schedule focused on food & farm	Oct. 2013 article about a new truck driving program offered by NCC	President's Report November 2013	Brochure on concurrent enrollment with NCC
Flyer for wine harvesting workshops	December 2013 article discussing the need for community college degrees in skilled-trade careers for the state	Flyer for business owners to learn about funding opportunities from GLEC	
Flyer for online course offerings		Informational sheet about GLEC available at their offices	
Grant Proposal		Flyer for a November 2013 forum for Growth Companies	
NCC 5 year Master Plan		October/November 2013 Newsletter discussing Fab Lab's progress	
		July/August 2013 Newsletter introducing Fab Lab idea	

The fourth form of data collected was a survey of a random sample of business owners within the local community in which NCC operates. A short survey was created that asked business owners how they perceive NCC's role in the community and its role in the economic development for the area. Each business owner was asked seven questions, which can be reviewed on Appendix B. In order to identify this random sampling of businesses, my first strategy was to use the Chamber of Commerce database. I randomly selected businesses to contact. After emailing over 75 businesses, only 5 responded and were willing to participate in this short survey. With such a low response rate, my next strategy was to go door-to-door and

ask in person for participation. This new strategy yielded much better results and I was not turned away by any business. When entering the business, I asked to speak with the owner or a manager. Most of the small businesses located downtown are family-run, and most owners were present when I asked for participation. Overall, I collected 25 responses from business owners.

The interviews, observations, document review, and the random sample are critical to my data analysis, which will be described in depth below. Each of these types of data offered an opportunity to examine my research questions. Observations allowed me to see how NCC and GLEC work together on projects that will further the community rather than relying solely on individual interviews. Document review is also essential to the data collection process, as documents highlighted how important messages from NCC were communicated to the public, and how the community responded to these messages through public comments on newspaper articles when they were available. Lastly, the random sample provided a snapshot of how local business owners viewed the role that NCC played in the community. The next section will review how participants were selected for this study.

Participant Selection

Participants were selected for interviews based on several considerations. First, I met with the dean at NCC to discuss my research study and was provided with an extensive list of possible participants. This list included both NCC employees and community leaders who had worked closely with the college on the Fab Lab committee. Additionally, I attended several meetings in which leaders from NCC met with several community organizations to discuss the Fab Lab. By attending these meetings, I was able to identify a few community leaders whose participation would benefit the study. Additionally, snowball sampling was used to identify additional stakeholders and potential participants. Snowball sampling is useful in that it allows

participants in the study to identify other key stakeholders that may not have otherwise been obvious participants (Marshall & Rossman, 2006). Table 2 shows the list of the 14 participants and their role in the college or community.

Table 2: List of Participants

Dean Harding	NCC Administrator
Ms. Anderson	NCC Administrator
Mr. Spalding	Community Member
Dr. Green	NCC Administrator/Faculty
Dr. Wilder	NCC Administrator
Mr. Powers	K-12
Ms. Springs	K-12
Mr. Rider	GLEC
Ms. Morris	Community Member
Ms. Cooper	State Economic Development Agency
Mr. Edwards	NCC Faculty
Mr. Pablo	University Center Administrator
Mr. Carson	City Manager
Professor Geller	NCC Faculty

Interview Protocol

Interviews were the primary source of data for this case study. Based on the information gained through the literature review, interview questions were designed to gain insight into how leaders at NCC view their role in the community and their role in economic development. A

pilot study was conducted in order to refine the interview questions to ensure the questions that were being asked provided the interviewee with an opportunity to respond to and address the key questions in answering the research questions for this study. Two administrators at a rural community college (a different site than NCC) were interviewed using the research questions shown in Appendix C. After reviewing the interviewee's responses, adjustments were made to the questions, with more probes added in order to allow the interviewee to elaborate. Many probes were added to questions in order to elicit a deeper reflection from the respondent. Overall, the pilot study allowed me to identify where the interview questions failed to provide the respondent with an opportunity to address the core concepts of the conceptual framework (interconnectedness, economic development partnership, and double-loop learning). A final list of interview questions can be found in Appendix D.

Interviews with community members involved similar questions, with the goal to develop understanding around how community members view NCC's role in the community. By interviewing employees of NCC and community members, I was able to compare what the leaders of NCC think their impact on the community is and how community leaders actually perceive NCC's role.

Interviews were semi-structured and lasted between 45 minutes to one hour. Initial interview questions were created by first reviewing the three gaps identified in the literature review. For example, one of the key gaps found within the literature is a lack of understanding about how goals are developed in an economic development partnership. Therefore, questions about how the college develops goals, which stakeholders are involved in that process, and how those goals are measured will aid in understanding—if the described goals connect with the key

concepts of a learning region. I drafted interview questions intended to elicit information that would help me begin to understand the gaps in the literature and answer the research questions.

A second round of interviews took place with three key stakeholders. These participants were interviewed a second time in order to ask follow-up questions and allow each participant to review my initial findings as a way of member checking. The three participants for the follow-up interviews were selected once the first round of data was complete, which included all interviews, observations, document review, and the random sample. Based on the initial findings, I selected participants who could help answer some key questions that had gone unanswered. Below is the list of the participants in the second round of interviews.

Table 3: List of Follow-up Interview Participants

Dean Harding	NCC Administrator
Dr. Green	NCC Administrator/Faculty
Professor Geller	NCC Faculty

The three NCC participants were selected because I had remaining questions about how the organization defined economic development and some specific questions about the career services the college provides. While I had intended to interview other participants during this second round of data collection, I had reached significant saturation in their responses during the first round of data collection and did not have additional questions for non-NCC participants.

The second round of interviews lasted approximately 30 minutes and provided a time for each participant to review a vignette I had written about their first interview. Short vignettes were written about the first interviews with Dean Harding, Dr. Green, and Professor Geller. The vignettes provided me an opportunity to review the interviews and begin identifying themes. Additionally, having the participants review their vignette served as a member check and helped

establish credibility within the study. The three vignettes can be seen in Appendix E. Member checks will be discussed in more depth later in this section. Participants were asked follow-up questions about how NCC defines economic development, how programs NCC operates are assessed, and what types of career placement services are available to students. A full list of interview questions for the second round of interviews can be found in Appendix F.

Methods to Protect Participants and Institutional Review Board

In order to protect the identities of the participants in my study, as well as protect the location of NCC, all names of participants and cities have been assigned a pseudonym. Participation in this study was completely voluntary and no financial benefits were offered. Additionally, the location of the college is not disclosed within the study and the only indicator is that it is located in a Great Lakes state in the Midwest.

This study was subject to the IRB research application process at Michigan State University and was approved, based on the study design. All protocols were followed as per IRB instructions. A copy of the approved consent form that each participant was required to sign can be found in Appendix G.

Analytical Approach

There are two main research questions for this study. The first question seeks to identify the key stakeholders that work with NCC. The second question seeks to examine to what extent aspects of a learning region are present in the relationships between a rural community college and its community. In order to analyze this case, I used six key analytical strategies that were identified by Miles and Huberman (1994), Patton (2002), and Yin (2009). These strategies include: (a) creation of a case record, (b) contact summary form, (c) first-level coding, (d) pattern coding, (e) memos, and (f) interim case summary. This section will review these seven steps of

my data analysis. Marshall and Rossman (2006) note that in qualitative research data analysis does not occur in a linear fashion and each stage of the analytical process is not mutually exclusive. Overall, it is important to note for each individual strategy that the analysis of the case occurred throughout the entire data-collection process, and these six analytical strategies did not occur separately but were continuous throughout data analysis.

First, a case record was created that brought all pieces of data into one place. Patton (2002) describes the case record as a document that pulls together all the case data into a comprehensive package. The case record does not include any interpretations; instead, it is a way to organize all the data into a cohesive file (Patton, 2002). For this study an online qualitative data application was used to assist in building the case record and in analyzing the data. Dedoose, the application that I used to analyze the qualitative data, is an online program that researchers can use to input their data, analyze their data, and upload all documents relevant to a study. Once all the data was entered into Dedoose, the data was then transferred to an Excel spreadsheet that could be used as the case record.

Second, after each interview or contact that was made throughout the data collection process, I completed a contact summary form (see Appendix H). The contact summary form allowed me to briefly review my interactions with a contact. The form also provided me with a quick opportunity to review the most salient points discussed and to note any unanswered questions I had for the participant. The contact summary form was important for this study in that it provided me with an opportunity to review my thoughts and observations from the interview. Since the research site was located at a significant distance from my office, these forms were essential to writing down notes before key observations were forgotten during my commute from the case site to my office.

The third analytical strategy that I used was coding the data. Coding data involves reviewing interviews and observations and looking for patterns or themes (Patton, 2002). The process of developing codes first began with reading through each interview separately and making notes in the margins on emerging themes or topics. Patton (2002) describes this as the first take at organizing the data into topics and files. An initial list of codes can be found in Appendix I. Each interview, observation, and any additional field notes were read through several times in order to be completely coded.

Once all the data had gone through a first-level coding, the next step of analysis was pattern coding, the identification of patterns within the initial coding. This was the fourth analytical strategy. Grouping the initial codes together into overarching patterns and themes forms new codes, referred to as pattern codes. Pattern codes pull together the data in a more meaningful way than first-level coding and allow the researcher to reduce the number of concepts in a manageable way (Miles & Huberman, 1994). This part of the analytical process is focused on reducing the data and making sense of larger themes that emerge throughout the study (Patton, 2002). In this study, pattern codes were developed in two ways. First, codes that were similar in topic were combined and grouped together. For example, the codes *creating community* and *links between stakeholders* yielded similar exerts and were combined into one new pattern code: *building relationships*. Second, the three key characteristics selected for this study, interconnectedness, lifelong learning, and economic development, which are also the terms that are used to describe a learning region, were used as pattern codes in order to determine whether or not those characteristics were discussed throughout the data. A complete list of pattern codes can be found in Appendix J.

The fifth analytical strategy used was writing memos. Memos help the researcher not only review the data but to try to connect the data with the research goals (Maxwell, 2013). Memoing consists of the researcher writing brief statements that reflect upon the data being collected, discussing the development of codes and themes, and provide the researcher an opportunity to conceptualize the data (Miles & Huberman, 1994). Additionally, Miles and Huberman (1994) suggest coding the memos to allow for easy retrieval throughout the data analysis. Memos were labeled with themes and used to connect important concepts that emerged from the data. The memos were also used to identify pattern codes that were used during the second round of coding.

The sixth analytical strategy is referred to as an interim case summary. An interim case summary “provides a synthesis of what the researcher knows about the case and also indicates what may remain to be found” (Miles & Huberman, 1991, 79). The interim case summary can range from 10-25 pages in length and reviews the findings, examines how data supports the findings, and lists unanswered questions that should be addressed in the next round of data collection. For this study an interim case summary was written prior to a second round of interviews with the three key participants. This allowed me to review what my findings were at that point in the data collection process. The interim case summary can be found in Appendix K.

Trustworthiness

Trustworthiness is a term often used in qualitative research that describes how a researcher has worked to ensure their research can be trusted (Patton, 1999). Trustworthiness is one aspect of credibility and validity, and it is important to establish so that the interpretations I make as a researcher can be trusted and seen as objective (Patton, 1999). To ensure trustworthiness throughout the study, several strategies were implemented. First, during data

collection, all interviews were recorded and transcribed verbatim for analysis. A second step that I took to ensure trustworthiness was collecting data (particularly interviews) until saturation was achieved wherever possible. Once a description of the case was completed, I asked a few participants to review and comment on their own perceptions to ensure accuracy (Patton, 2002). These were short vignettes that I had written based on the first interviews with Dean Harding, Dr. Green, and Professor Geller. They each reviewed their vignette and were able to make any changes they felt necessary.

I also took steps to address my own potential bias. Having worked in a small rural community college, I learned a great deal about the challenges faced by rural community colleges in regards to the pressures to have increased retention and higher graduation rates. I also have a greater understanding of the important role that a rural community college plays within its local region and that the community boundaries are typically hard to define as the geographical area is much larger than that of an urban or suburban community college. My experiences may be a potential source of bias in my analysis. Being cognizant of this bias is the first step towards ensuring that it does not overly influence by data analysis.

Also, using member checks is another way to ensure trustworthiness. Member checking is when the researcher shows participants portions of the data analysis in order to have them review what is being concluded from the data (Maxwell, 2013). Member checks are the most important way to ensure that the researcher is not misinterpreting the meaning of what the participants have shared throughout the data collection (Maxwell, 2013). In this study, member checks took place at the end of data analysis and once a draft of the findings had been written. Three participants were selected to review the findings of this study and provide feedback on whether the findings provided an accurate description of the relationship NCC has with the local

community. Two of the three participants responded to the findings and noted that the analysis was accurate and offered no necessary changes. I also included another form of member checks by asking a few participants to review the findings of this study. After a complete draft was finished of the findings, I contacted three participants from NCC and asked if they would review the findings. Dr. Green, Dean Harding, and Mr. Edwards were the participants who were asked to review the findings, as they serve as the main administrators at NCC and would likely have the best perspective to review the findings of this study for accuracy. Dr. Green and Dean Harding responded to my request and supported my findings. Both noted that my findings were an accurate description of NCC and the relationship the college has with its key stakeholders. Mr. Edwards did not respond to the request.

In order to position myself within the study as a researcher, I must acknowledge the experiences and prior knowledge I have before entering the case. Creswell (2007) notes that it is important for the researcher to provide an understanding of the experiences and perspectives that he/she brings to the study. As a former employee of a rural community college similar to NCC, I carry a certain understanding and bias towards rural communities. For example, the community college I worked for was struggling to improve economic development opportunities for the region and currently struggles to overcome a lack of resources in the region. Knowing this in advance, it was essential that I did not let this knowledge interfere with my data collection and analysis. Although my personal connection to the region and prior knowledge could be a potential limitation for this study, I took steps to ensure that my personal biases were not present within my analysis. Having participants review vignettes that were written based on their interviews was one step to ensure my bias was not present within my analysis. The second round

of interviews with Dean Harding, Dr. Green, and Professor Geller also provided me with an opportunity to discuss my initial findings and make sure they were not biased interpretations.

Using multiple sources of data facilitated triangulation (Yin, 2009). Triangulation is the use of multiple sources of evidence in case study research (Yin, 2009). Yin (2009) states that the use of multiple sources of evidence is extremely important in case studies, and that using multiple sources of evidence allows the researcher to address a broad range of historical and behavioral issues. For that reason, this study used interviews, observations, document review, and a random sample of business owners as part of the data collection. Another important strategy for ensuring triangulation is the development of a case study database, which organizes all the data that was collected into a streamlined vessel (Yin, 2009). The case study database included my personal field notes, documents collected throughout the study, interview transcriptions, and key narratives from respondents (Yin, 2009). Once again, this information was stored using Dedoose and downloaded once analysis was complete in order to secure the data.

Limitations

Single case studies are beneficial when examining a unique or rare case; however, the results are limited to that case and are not generalizable (Stake, 1995). The case at NCC will be unique in many aspects. First, it is the only case of its kind and therefore it is not possible to compare it to others. Second, NCC has two branch campuses that play an important role in connecting the college to the region. Other rural community colleges may not have branch campuses, which could possibly limit their connection to the results found in this region and particular case.

Second, this case is limited to the experiences of a community college in the Midwest. Context is extremely important when setting the case, and the experiences of this case may not be seen in cases outside the rural Midwestern context. Given the significant changes the region experienced due to the economic recession that began in 2008, it cannot necessarily be compared to other parts of the country that may not have experienced similar economic decline.

The third limitation of this study is that it is not longitudinal, but rather it captures just a slice of the experiences of those being interviewed. While some interview questions asked about the interviewee's prior experiences, the case study was only truly able to capture the most current memories of each interviewee. For example, a large focus of the study was on the development of the Fab Lab, however, the impact of the Fab Lab on the region and college will remain unknown since it was just created at the end of data collection.

The scope of this study is bounded by the experience of one rural community college's relationship with the local community. This study does not examine how the college may or may not contribute to a learning region outside this relationship. There also may be other ways in which the college promotes aspects of a learning region that are not captured within this study. Given that the second research question focuses on the role of economic development, participants of the study were selected with this in mind. For example, the random sample of business owners was completely focused on local business owners' perspectives of the college's role in the community and in economic development. Perhaps asking other community members the same questions would have yielded different answers and provided a different perspective on the extent to which NCC contributes to the creation of a learning region and economic development.

Chapter 4: Findings

The first step towards understanding whether or not a community operates as a learning region is to identify which groups, businesses, or organizations serve as the main stakeholders in the community. The first research question for this study, *What are the links between a rural community college and the local community?* This chapter describes the links between NCC and the community. In the next chapter, these connections will be analyzed. These links were identified using many sources of data including: (a) interviews of representatives from K-12 schools, community organizations, and NCC, (b) observations, (c) document review, and (d) interviews from the random sample of business owners.

To review the conceptual framework, below is the proposed model for a learning region for NCC. This chapter identifies the key stakeholders in the region based on the data collected for this study. Interviews were the source of data that primarily assisted in identifying the key stakeholders. This study examined five stakeholder groups to determine their relationship to NCC. These stakeholders are: the local community/community organizations, local industries, the Great Lakes Economic Coalition, government agencies, and K-12 schools. Chapter 5 analyzes what learning region characteristics are present in the relationships between NCC and their key stakeholders.

Local Community and Community Organizations

Reviewing NCC's mission statement was the first step to identifying potential links to the community. The mission statement served as NCC's guiding principle and identified the main purpose of the college. This statement can assist in identifying whether the college includes outside stakeholders as part of its mission. The mission stated, "[NCC] provides educational, economic and cultural opportunities for student learning, personal growth and community

improvement.” This mission statement suggests that NCC strives to connect with students and community members not only through educational offerings but also through other community improvement efforts. In the fall of 2013, NCC’s Department of Corporate and Community Education (CCE) offered nearly 40 different workshops for community members. These workshops ranged from how to use an iPad to grape growing. The workshops were an example of NCC’s commitment to furthering the education of all of their community members regardless of members’ prior educational background and their commitment to connecting with the community on an informal level.

In addition to offering these workshops at their main campus in Great Lakes City, NCC also offered a few workshops at their newest branch campus in Midwest City. The fact that the workshops were offered at both locations is one example of NCC’s demonstrated connection with the local community and a demonstration of follow through on their mission to provide educational opportunities for the community. The courses were building a connection to NCC in two main ways. First, the community education courses brought community members to campus that might otherwise never have entered campus. The second way the courses built a connection to the community is by utilizing community resources to help produce the courses. For example, the grape-harvesting course was created after community members expressed interest in this topic. Due to the number of wineries in the region served by NCC, this course was able to be offered through direct partnerships with the wine-making industry. Reaching out to new businesses, like wineries, could assist NCC in making new community connections in the future.

Although there appeared to be a variety of courses available to the community, the knowledge of such offerings was limited among local business owners. When asked what type of services NCC provided for the community, the local business owners responded almost

unanimously that NCC's main contributions to the community were their fitness and recreation center. None of the business owners mentioned the workshops available through the community education department. Overall, local business owners were not knowledgeable of the services that NCC offered, and only those who had previously attended a business lecture series knew about the courses that were available for business owners. Several business owners noted that they wished NCC had better advertising about what they had to offer in regards to community classes and services for the community.

NCC's connection to the community was difficult to identify given the large geographical area that NCC services. Defining community for NCC was a challenge for participants since there were three campuses that were separated geographically throughout the region. NCC's main campus was located in Great Lakes City; however, they also had two more branch campuses that were both approximately an hour's car ride away from Great Lakes City. Midwest City housed NCC's newest branch campus, which had only been open for one year at the time of data collection. Midwest City was located about an hour east of Great Lake City. Although NCC had been offering classes in Midwest City since the 1970s, they had never maintained a building or campus at that location and were only offering a very few courses. The new campus allowed NCC to expand its offerings and maintain a visual presence within the community. The second branch campus was located in Lake View City and was housed within a University Center along with several other four-year institutions and one other community college.

The relationship between NCC and the branch campuses was extremely different depending on the city. For example, in Midwest City, NCC had a very strong community organization that had assisted NCC in securing its new building and aided the organization in

working through roadblocks that arose throughout the process of securing the building. Mr. Spalding, a community member at one of NCC's branch campuses in Midwest City, was very passionate about the branch campus' connection to NCC. He worked with a local economic development organization that had welcomed the college and helped to make sure NCC didn't hit roadblocks from the local government agencies when securing their new building. Mr. Spalding stated:

We [a community organization at a branch campus location] wanted them to feel welcome. We raised money, we bought the sign out in front, we got the garden club to do some flowers and flowerbeds and that kind of stuff. We didn't want the college to think that they were having to elbow their way in. So, they had a group of local people here that were avidly advocating the college. We've gone to the, to the county commissions, we're going, we've been to the state township association, as all the townships get together, and said, guys you all need to talk this up in your communities. This idea, first of all it makes all kinds of sense, because these poor people trying to send their kid down to [a state college] at, you know, 15,000 dollars a year, can, can do that for one, one fifth of that amount in the community college.

Mr. Spalding was a very active community member from NCC's newest branch campus and had hopes that NCC would be able to offer a complete associate's degree at the branch location. The branch campus was located approximately 45 minutes away from the main campus. Mr. Spalding noted that during the months of winter it became difficult for students to make the commute to the main campus to attend classes because of slippery roads and bad weather. Thus, these students based in Midwest City were less likely to complete a degree than a student who lived closer to the main campus.

While Midwest City's local economic development group assisted in NCC's expansion, it also required a great deal of commitment from NCC. NCC had to be willing to support the expansion with additional financial support and by hiring new personnel. This example was the only case of NCC and a community organization working together on an ongoing project throughout the data collection that was not tied to a personal connection from an NCC employee. NCC's relationship with Midwest City's economic development organization seemed to be consistent and continuous since the development of the new campus. Ms. Anderson and Mr. Spalding noted that they continued to work together to address any problems NCC ran into with their new building. Additionally, Ms. Morris, a member of Midwest City's economic development group, sat on an advisory board for NCC, which allowed her to stay connected to the college. Even after Midwest City campus had been open for a year, NCC was still engaged with the local economic development organization to discuss new projects and continue working together to ensure the campus was offering programs and training that was needed in the town.

The branch campus at Lake View City operated differently since it was located in a University Center with many other colleges. The University Center was financially supported by Lake View City, which required very little interaction with the colleges that were housed within the center. NCC was one of many colleges in the University Center and did not have to engage with community members in the same way they did in Midwest City. At Midwest City NCC has had to work with many city leaders in order to secure their new building and address parking issues, however, at Lake View City, those issues were handled by the University Center staff.

In terms of the University Center's connection to NCC, there was limited knowledge of NCC's offerings from staff at the University Center. Mr. Pablo, the Director of the University Center, was not familiar with NCC's offerings or the role they played in the community. He had

limited knowledge of a lecture series they had offered in the past to the community and did not recall them interacting with the local community in any other way.

Ms. Anderson serves as the Director of Off-Campus Programs and spends part of her week at the Midwest campus and the rest of the week at the Lake View City campus. With the exception of one part-time receptionist, Ms. Anderson is the only NCC employee who spends time at the branch locations. She also mentioned that her position requires her to represent admissions, academic advising, financial aid, and even deal with facilities issues. This leaves little time to reach out to the local community. Ms. Anderson hopes that in the future she is able to attend more community meetings, specifically at the Lake View City campus, on behalf of NCC.

Overall, NCC's relationship with the community varies depending on the campus. Given that Midwest City has a strong community organization working with NCC to develop their campus and programming, it was evident that the relationship was growing, while NCC's relationship with Lake View City was more disconnected, given they were housed within a University Center, had limited staff available to work on building a stronger connection with the local community, and were not well connected with any community organizations.

Another connection that was examined in the data was the connection between NCC and community organizations. The main way NCC is connected to community organizations is on an individual level. Four out of the five NCC leaders that were interviewed all noted their involvement with local organizations. Community organizations that were discussed most frequently were the Rotary Club and the Chamber of Commerce. Several NCC leaders listed the Rotary Club as an important community organization that NCC worked with on a continual basis. Many NCC employees, including Dean Harding, were active members of the Rotary

Club. The Rotary Club is a community organization that works to foster service, impart an understanding of business, and promote fellowship among business professionals internationally. President Wilder, NCC's President, commented that college representatives often give presentations to the local Rotary Clubs about on-going projects. Based on interviews, and observing a Rotary Club meeting at Midwest City, it was evident that the relationship between NCC and the local Rotary Clubs was primarily based on information, meaning NCC provided information to the Rotary about what they were doing in the community and when the Rotary Club could possibly assist in supporting a project, whether through marketing, financial support, or by providing volunteers.

Another organization that NCC leaders noted as being an important partner was the Chamber of Commerce. President Wilder served as the President of the Chamber of Commerce, and one participant noted that she played a significant role within the Chamber of Commerce, assisting with building the community's economic opportunities. In addition, Dean Harding noted that the college's connection to the local Chamber of Commerce offices in all of their campus locations assisted NCC with staying connected to local industries. NCC's connection to the Chamber of Commerce in Great Lake City was only evident based on the fact that President Wilder served as the President of NCC and the Chamber of Commerce. Whether or not the relationship with the Chamber of Commerce extended beyond President Wilder's involvement was not mentioned by study participants. When asked who NCC's key stakeholders were, many participants mentioned the connection to the Chamber of Commerce through President Wilder's role, but they did not provide examples of how the two organizations have partnered together in the past.

At the branch campuses, the connection to the local Chamber of Commerce was not discussed by any other participants. Ms. Anderson was the only NCC employee that had a direct connection to the other chamber offices as she was the only full-time employee that worked at both branch locations. Ms. Anderson did not comment on NCC's relationship to the local chambers offices at the branch campuses. Ms. Anderson did acknowledge that NCC hadn't done a lot of community outreach at the Lake View City location and hoped that NCC would be able to do more work with the community in the coming years.

In addition to the Rotary Club and Chamber of Commerce, NCC was involved in several other community organizations during the period this research was conducted. The college's involvement in these additional organizations seemed to be driven by the NCC employees' personal interests, rather than NCC's desire to be connected to the organization. For example, Dr. Green served on several allied health organizations in the region and state. Because of his background in the allied health field, Dr. Green was very committed to the field and volunteered on many boards in the region and state. Dr. Green's role in these organizations was primarily based on his previous experiences and desire to stay connected to the field, and while his community involvement was extensive, his contribution was not motivated primarily by a desire to connect the allied health field to the local community in order to further NCC's partnerships with local organizations. Dr. Green also shared that he was a member of a few organizations that he participated in "just for fun." One such organization was the state's Museum Association. Although this organization does not impact Dr. Green's direct community it is something that he personally enjoys and keeps him engaged with a broader community that he is connected to.

Thus, based on interviews with NCC participants, the college's involvement with community organizations seemed to be largely motivated as a result of the individual employee's

personal memberships rather than because of a directive from NCC. Dean Harding, President Wilder, Ms. Anderson, and Dr. Green's memberships in their organizations were not stated as part of their job description, rather they had become members of their particular groups for personal reasons. However, their personal memberships in these organizations did benefit the relationship to NCC. While observing one Rotary Club meeting at Midwest City, I watched as Dean Harding and Ms. Anderson gave a presentation on the new Fab Lab project in order to help gain community support for the lab before it was built. Although members of the Rotary Club did not have a lot of knowledge of NCC's offerings within the community, they were very responsive to the presentation and hoped that the Fab Lab would be able to come to the local high schools at Midwest City to offer classes to high school students.

Overall, efforts to connect to the community were discussed mostly on an individual level rather than at the institutional level. While the college administrators mentioned above all served on organizations throughout the community, most of these memberships were personally driven and not a requirement of their role at NCC and any benefit to the college was secondary to the personal benefit derived from the participants themselves. This suggests that over time the connection to the local community and these particular community groups would change if the individuals changed their membership status within these organizations.

However, several times throughout the interviews, respondents did comment that their relationship with NCC had changed since Dean Harding had come to the college. Based on these interviews, it became clear that Dean Harding's involvement in community organizations had been significantly higher than previous employees at NCC. Ms. Morris, a community member at Midwest City, described Dean Harding's commitment to expanding the course offerings at Midwest City and working to get the new campus set up. Ms. Morris stated:

[Dean Harding] has been very, very supportive and helpful to us and really I think very dedicated to smooth out the process with the powers that be at the college and push the idea forward in a way that has gained a lot of support from the president of the college, chairman, and other people. So I think that she's been extraordinarily helpful.

Individual characteristics and personal commitment to organizations was an important finding that will be discussed further in Chapter 5. NCC's connection to the local community and community organizations occurred in several ways and appeared to be a mutually beneficial relationship in which community members could reach out to the college when in need of a service, and the college was able to connect with the local community by serving on local community organizations.

Local Industries and Great Lakes Economic Coalition

Next, NCC's connection to local industries was also examined for this study. No industry representatives responded to the request to participate in this study, however, the relationship was examined using interviews from participants who could attest to NCC's involvement with local industries. Additionally, a local organization, the Great Lakes Economic Coalition (GLEC), which works to bring opportunities for economic development to the region, was also examined. The GLEC had been operating in the region for nearly 30 years and was focused on assisting current businesses to thrive in the area as well as attract new business to the region. This section will examine NCC's relationship with both local industries and the Great Lakes Economic Coalition.

The second component of NCC's mission statement was providing economic opportunities for the community. When interviewing local business owners, a majority of participants responded that NCC didn't play a significant role in economic development for the

region. A few respondents noted that the only role NCC did play in promoting economic development was by providing training and affordable education. Overall, business owners did not view NCC as a major player in improving economic development for the region. Trisha, a local business owner, stated, "No, they don't play a vital role in economic development. They focus on educating students and working with four-year institutions to expand academic programs." There were nine business owners that indicated NCC played some role in economic development, however, the most popular response was that NCC was a major employer for the region. Although NCC leaders stated the college promoted economic development as part of its mission, the true impact NCC had on economic development for the region was not clear. If they were contributing to the economic development of the region, their contributions were not being recognized by area businesses. It is also worth noting that having a strong connection to local industries is one characteristic of a college working towards improving economic development for their region, and that the level of connection demonstrated by these interviews did not seem to substantiate that particular requirement.

During the time of the study, NCC was connected to local industries in the area in two main ways. First, NCC's Department of Corporate and Continuing Education (CCE) was a major player in connecting the college to local industries. The goal of the CCE department was to partner with local industries to design and conduct workforce development education opportunities, and the CCE fulfilled that responsibility by reaching out to local industries to assist in designing curriculum for their needs. The CCE department performed outreach to local industries to determine what types of training they needed to fulfill workplace objectives. Industries would often seek out NCC when they needed a specific type of training.

Mr. Edwards, Chair of the Continuing Education department at NCC, discussed the role NCC played in the community and how the college's involvement had changed over time. Mr. Edwards stated:

Prior to me starting 28 years ago, we really didn't have anything to address the need out in the community for retraining incumbent workers or for new hires or any of the non-credit activity. It just didn't exist. They just said it wasn't available. And so since that time, um, we've been pretty much the department that deals with all the non-credit activity. And most people think of non-credit activity as continuing education or community education classes: the basket-weaving classes, the art classes, the digital photography classes. And that's all important. But primarily what we've been doing over the history of this department is going out and talking with companies, finding out what their training needs are and then setting up training programs for their employees, usually at their facility, so it's convenient. And it's flexible, it's customized, it meets their unique needs and it's short-term and it's usually non-credit.

Mr. Edwards's quote highlights the commitment NCC has placed on providing a variety of training opportunities and courses to serve local industries and the community. Interview participants for this study often commented on the CCE department's course offerings as being important to the community. Mr. Rider also noted that he worked with Mr. Edwards often to connect industries to NCC so that trainings could be made available and if possible assist businesses in receiving grant money to pay for the trainings.

Although the Department of Corporate and Community Education worked with some industries in the area, it seemed as though the main way NCC was connected to local industries was through their partnership with the Great Lakes Economic Coalition (GLEC). GLEC was a

regional, private organization that worked to bring in new industries to the region and assisted existing industries and businesses to help them continue to prosper. When NCC leaders were asked about economic development efforts, GLEC was almost unanimously included in examples of organizations that NCC partnered with on economic development tasks. One of the main examples of NCC's work with GLEC came to fruition during data collection. For over a year NCC and GLEC had been working on developing a new mobile Fabrication Lab (Fab Lab) that would be a mobile lab designed to train individuals in computerized numerical control (CNC). Essentially, the Fab Lab would train individuals on how to use a computer software program and a computerized machine to produce a variety of machine parts, surgical instruments, or anything the software was able to design.

In the fall of 2013, the Fab Lab was moving forward and scheduled to be built by early February 2014. NCC took a leadership role early on when GLEC presented this idea and had since fronted the funds to pay for the lab and had hired a full-time director. NCC would also be responsible for paying for the continual maintenance of the truck. The goal of the Fab Lab was to provide advanced training for local industries and provide certificates for college students in CNC. Additionally, the Fab Lab would be given funds to cover the start-up costs of \$300,000 from the state if 30 new employees were hired by one of the local manufacturers who had signed on as a partner for the Fab Lab. The presence of the Fab Lab project indicated that NCC had a strong partnership with GLEC and some local industries. The impact of the Fab Lab on economic development is currently unknown since the lab was not intended to be fully operational until Fall 2014, which is outside of the scope of this study's timeline.

NCC has had a representative on the GLEC executive board for the past 28 years; however, within the past five years, NCC became an official partner of GLEC. This change

included an additional financial component on behalf of NCC to support the GLEC and added NCC's logo to all GLEC publications. Since becoming an official partner with GLEC, NCC became more engaged with GLEC and became the main sponsor of the new Fab Lab. This increased involvement with GLEC has also sparked NCC to work on additional economic development projects. Mr. Rider, the Entrepreneur Director for GLEC, has worked closely with Dean Harding and Mr. Edwards over the past couple years in order to get the Fab Lab started. The Fab Lab was Mr. Rider's idea, but it came to fruition once NCC agreed to take a leadership role as the main financial supporter and leader of the Fab Lab committee. When asked how Mr. Rider views NCC's role in economic development he stated:

I think it is an evolving role and I think they've got ... are making some progress. I think they got a commitment to economic development. But I'm not sure in the past how much of a role they've had or maybe have chosen to have. I mean indirectly they have a role just because they're providing training and education for the workforce. But now I think they're being more proactive and directly working with businesses and us and trying to see what they can do to better meet the needs to spur economic development.

Part of this shift in NCC's involvement in economic development is an increased involvement with GLEC. Mr. Rider also noted that NCC was going to be partnering with GLEC on other upcoming projects and he was hopeful that their involvement would continue to increase. The data revealed that NCC's involvement with GLEC had changed within the past two years, from NCC participating in a passive way on GLEC's board to becoming an active partner and engaging in more economic development projects both financially and through increased participation from NCC personnel.

GLEC also played a significant role in connecting local industries to NCC. Mr. Rider worked closely with local businesses to identify their needs and assist them in any way possible. Mr. Rider discussed that when working with businesses that were in need of training, he often contacted NCC to see if there was any type of training they could provide to assist the business. GLEC strived to assist businesses in staying in the region, and NCC assisted the GLEC in this goal by providing educational offerings.

Although NCC seemed to be connected to some industries in the region, the college struggled with their relationship with one of the most prominent industries in the region: hospitality. Dr. Green discussed how NCC used to have a hospitality program about 10 years ago, but the program eventually was discontinued for two main reasons. First, enrollment in the program dwindled and as a result NCC decided to turn all hospitality courses into non-credit classes. The second, and perhaps most important, reason NCC no longer had a hospitality program was because students who had earned their certificate or degree in hospitality were not getting paid more than their colleagues who did not have the credentials. Dr. Green stated:

We created a hospitality and casino management program under direct pressure from the casino 10 years ago. We ran classes for 4-5 years with diminishing enrollment. Students graduated and returned to their employers, but were not being given a pay increase, which limited enrollment. Classes haven't been offered in a number of years, which has caused friction with the casino. But they aren't holding up their end of the bargain to pay people more.

Although NCC did have some projects geared towards helping with economic development, their participation seemed to be largely through their partnership with GLEC. Specifically, Mr. Rider was often referred to as NCC's main liaison to local industries and has

also been the main GLEC representative working on the Fab Lab. Overall, NCC's main impact on economic development that was represented throughout the data was its ability to design curriculum for local industries and train students in desired fields for the region.

K-12 Schools

In addition to the links between NCC and the community/community organizations, GLEC, and local industries, the connection to local K-12 schools was also examined in this study. NCC leaders noted their relationship with the local K-12 schools as being one of importance, primarily because their relationship allowed high school students to receive college credit before graduating from high school. However, throughout data collection, K-12 schools and NCC did not seem connected, and at times there was evidence of tension between NCC and K-12 schools. This section will review the connection between the local K-12 schools and NCC.

NCC sought to engage students at the college level early on in their schooling so that they might be more interested in learning about NCC and possibly attend after graduating from high school. NCC offered college credit to high school students in two ways. First, they offered the traditional dual-enrollment option, where high students could attend classes on campus and receive college credit while simultaneously remaining enrolled in their high school. Another way NCC offered college credit to high school students was through a newer program called direct credit, which was when NCC offered classes in the area high schools. These classes were taught by high school teachers, but students would receive college credit upon completion. Mr. Powers, a representative from the Intermediate School District, stated, "We have direct credit [with NCC] where students are actually getting college credit while in our high school classes to give them that leg up, at no cost. We've eliminated time and distance as well and additional barriers. Plus, we've given students the chance to say, 'Hey, I can actually take a college class

and do all right with this, maybe college is an option.'" These two types of credit offerings were the main way study participants described NCC's connection to the K-12 schools in the region.

Although NCC leaders discussed the importance of being connected to the local high schools, the data did not show a strong commitment to building this connection and working collaboratively together. Upon reviewing curriculum offerings from the local school districts and NCC's curriculum, there were many examples of curriculums that either overlapped or did not connect. For example, one of the school districts had recently created a new CNC curriculum and had partnered with a four-year institution; this relationship directly conflicted with NCC's Fab Lab. Also, there were many programs at the high school level that were not offered at NCC, such as automotive and construction technology, and as a result students interested in these areas could not receive additional training locally after high school.

Ms. Springs and Mr. Powers were the representatives from the K-12 schools who were interviewed for this study. They had a unique position in that they didn't work for just one school. Rather they worked for the regional Intermediate School District (ISD). The ISD covered about 1,100 square miles, an area approximately the size of Rhode Island, and included many public school districts and three chartered schools. Ms. Springs worked in the career and technical department for the ISD. She described her role thusly:

And my job here is working with business and industry, also working with the career counselors [at local high schools]. I meet with them several times throughout the year for a full day and also help them with other workshops and trainings that they may be in need of, and help to coordinate it so that it's in one location so they can all come rather than the cost of each school having their own workshop.

When asked how the ISD works with NCC, Ms. Springs mentioned that she worked with the college in a couple of different ways:

Yes, we do work with them; we have had opportunity to. They are invited to all of our counselors' meetings so they're available for that. [The NCC Rep] tries to make as many as she can so we always have her presence there. We also do a nontraditional activity in the spring - it's April 23rd this year - with [NCC] so that young girls from eighth grade up can go to the college and experience other females in careers.

Aside from inviting each other to meetings, it appeared that NCC and the local ISD did not interact on a regular basis.

I uncovered one way that NCC was attempting to make a stronger connection to the local K-12 schools through my conversations with the key players. The ISD had recently been a part of a NCC hiring committee to select an individual that would work for NCC as a Career Liaison. This person was hired to assist students in connecting with local industries so they could learn about career options. Mr. Powers also noted that he intended to invite the Career Liaison to attend meetings with K-12 principals, regional ISD meetings, and any other events or meetings that would assist in connecting the liaison to K-12 area schools. The career liaison position allowed NCC to focus more time on working with the K-12 schools. Prior to this position there have been several different NCC employees working with area K-12 schools, but not in a direct and sanctioned way, as this new position was designed to accomplish.

The relationship between NCC and the ISD wasn't described or perceived as being an active connection that the two entities worked on with intention. Rather they seemed to focus on inviting each other to meetings that would be beneficial to have representation at instead of working collaboratively. There was some tension discussed by both ISD and NCC participants

concerning the recent partnership one local school had made with a four-year institution without first reaching out to the local college, NCC.

The Fab Lab is a good project to examine the relationship between NCC and the ISD, considering that a major component of the Fab Lab was intended to be traveling to local high schools to provide students with an opportunity to earn college credit. Mr. Powers had served on the Fab Lab committee since the beginning of the project. On this particular project Mr. Powers noted that his role in the ISD allowed him and his colleague to serve as "conduits from our local districts to the college. Oftentimes, and this isn't unique to [NCC] and K-12, it's across the board—oftentimes there is that disconnect between K-12 and post secondary, and I think the ISD plays a pretty instrumental role in being [the] conduit to connect them." He further explained that he would be assisting NCC in getting the Fab Lab scheduled to go to various high schools in the area and helping to make those connections for NCC. However, when interviewing Professor Geller about the Fab Lab's schedule for the Fall semester, he noted that Mr. Edwards from NCC was working to connect with the local schools, and did not mention Mr. Powers serving as a connector for the Fab Lab.

It would seem as though the ISD has the potential to play an important role in serving as a connector to K-12 schools; however, in practice, their link to NCC is limited. Aside from serving on committees together and inviting NCC representatives to participate in meetings with high school counselors, the relationship between NCC and K-12 is minimal. NCC's main connection to K-12 schools is through their dual enrollment and direct credit offerings, which seem to occur mainly through the work of NCC employees reaching out to area schools.

Government Agencies

The last category of potential stakeholders I examined for this study were government agencies. First, and perhaps most important, was the local government. Mr. Carson, the City Manager of Great Lakes City, described NCC's role in the community as being one of providing a trained workforce for the area. When asked how NCC has partnered with the city, he noted that their partnership was probably unusual. As an example, NCC provided a baseball facility for the community, which was a combined effort on behalf of the city and college. The fields were used primarily by little league teams from the local school districts. Another example of how the city and NCC have worked together was the creation of a new road that would go through the college and offer a second entrance to the college. The road had been planned for over 25 years, but it was not finished until 2012. The city worked with the college in order to finally get the road built. Those were the two main examples Mr. Carson shared in order to demonstrate the city's relationship with NCC. These examples are project based and do not indicate that there is a strong ongoing connection between NCC and the local government. In addition, NCC participants did not list the local government or any local government employees as main stakeholders or partners for the college.

The second government agency the college connected with was the state's main economic development corporation, Northern State Economic Development Corporation. A representative from the Northern State Economic Development Corporation, Ms. Cooper, was interviewed for this study. Ms. Cooper worked with NCC and the GLEC on the Fab Lab by assisting them in locating state funds for the lab. The Northern State Economic Development Corporation cannot work directly with NCC, as the agency can only provide funds to a business or corporation, however, the funding structure for the Fab Lab was very complicated, and Ms.

Cooper assisted in making sure that eventually the funds for the project would get to NCC. In order to receive funding for the Fab Lab, the grant needed to go directly to the manufacturer. The state economic development agency had approved a grant for one manufacturer in Great Lake City that would cover the costs of the Fab Lab. Once the manufacturer hired 30 new employees, the state would issue the manufacturer the funds detailed in the grant. The manufacturer would then transfer the funds to NCC as a reimbursement for the initial costs of the Fab Lab. At the time of the study, NCC was at risk of not being refunded for the start-up costs of about \$300,000 if the manufacturer did not hire 30 new employees over a two-year timeframe. NCC's connection to the Northern State Economic Development Corporation was also project driven, and ongoing communication did not appear to be maintained on a regular basis.

As a result of the information gathered in these interviews, NCC's connection with local and state government agencies seemed to be another weak connection. Interactions and partnerships with government agencies was observed as only taking place when a specific project required additional funds that NCC did not have or if the local government needed approval from NCC to bring a particular project to fruition.

Conclusion

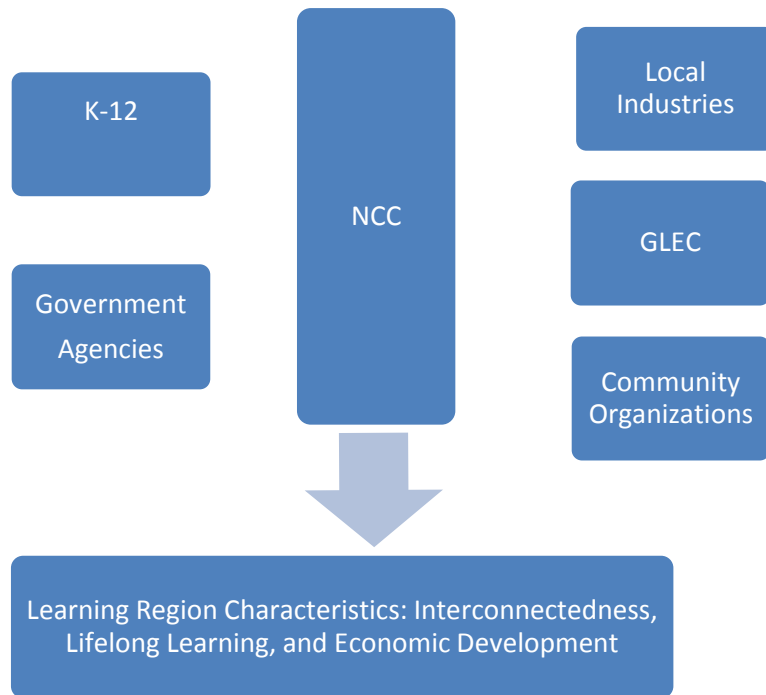
This study examined NCC's connection to five key stakeholders: the local community/ community organizations, GLEC, local industries, K-12, and government agencies. These stakeholders were selected because participants had identified them as being important connections for NCC and because they were also stakeholders mentioned within the learning region framework. GLEC and local industries emerged as the stakeholders that NCC had a mutually beneficial relationship with, which means that NCC worked with GLEC and local industries to achieve mutual goals that benefited both organizations. NCC's relationship with

GLEC had evolved significantly over the year before the study as a result of their work on the Fab Lab. Based on responses from Mr. Rider and Dean Harding, they hoped that the relationship would continue to grow and NCC would become more involved in GLEC. In the past, NCC had been working with local industries for many decades and had achieved varying levels of involvement with them. Before the economic downturn that began in 2008, the Department of Corporate and Continuing Education at NCC worked almost exclusively with local industries, designing and implementing customized trainings. During and after the recession, the department had to expand their offerings to include many community education offerings, however, NCC still works with local industries in the area. NCC's connection to the local community and community organizations seems to be one directional in that NCC reaches out to these two groups and they do not reciprocate. This was seen through NCC's connection to the local Rotary Club. Figure 4 shows the five key stakeholders for this study in the proposed learning region model. It is important to note that there may be other stakeholders that NCC is connected to that this study did not identify.

The data also revealed two opportunities for NCC to engage with several stakeholders. These opportunities are with the GLEC, which has members of NCC, K-12 schools, and local industry leaders on their board, and with the Fab Lab Committee. The GLEC and Fab Lab committees could serve as a venue for NCC to connect with all of their stakeholders in the same space.

Chapter 5 will review these connections further and examine what learning region characteristics are present within these connections to NCC. Furthermore, Chapter 5 will identify whether interconnectedness, lifelong learning, and economic development are present in the relationship between NCC and the community.

Figure 4: NCC's Key Stakeholders



Chapter 5: Findings

This study seeks to understand if some of the key characteristics of a learning region are present in the relationship between a rural community college and the surrounding community. Specifically, this chapter will examine the second research question of this study:

To what extent are aspects of a learning region (i.e. linkages between key stakeholders, a belief in lifelong learning, investment in individuals and community, and a focus on economic development) present in the relationship between a rural community college and the community?

This chapter begins with a presentation of the participants who were interviewed for the study and a list of business owners from the random sample. Next, I review how the data fits into the three key themes from the learning region that were selected as a focus for this study: interconnectedness, lifelong learning and investment in the individual, and economic development. Lastly, themes that emerged that did not fit within these learning region characteristics will be presented. Themes that emerged outside the three core concepts of Longworth's framework presented new characteristics that are important in framing what a learning region might look like for Great Lake City and NCC.

Learning Region Concepts

The data for this study was examined utilizing three main concepts from Longworth's learning region framework: interconnectedness, lifelong learning, and economic development. This section will review these three concepts based on the data.

Interconnectedness

The most frequently discussed concept of the learning region selected for this study was interconnectedness. Interconnectedness was described by Longworth as having all aspects of a community (students, parents, teachers, employers, and community members) working together to improve the community (Longworth, 2006). Furthermore, Longworth notes that a learning region will emphasize the importance of partnerships between an institution and other organizations (Longworth, 2006). Using this definition as a guide for this study, interconnectedness was not observed as Longworth had described. Rather, NCC's connection to the region varies depending on its current projects and which stakeholders' involvement is needed in order to move forward with their projects.

Out of the 30 initial codes, 11 of the codes encompassed some concept related to interconnectedness. These codes include *creating community*, *community outreach*, and *partnerships*. A full list of codes is available in Appendix F. These codes highlighted ways in which NCC is and is not connected to the local community. This section will review the connection between NCC and the five key stakeholder groups identified in chapter 4: K-12 schools, local community/community organizations, local industries, GLEC, and government agencies. Additionally, findings from the random sample of business owners will also be reviewed.

President Wilder, NCC's President at the time of the study, set the tone for the role the college played in the community by stating:

I think we are much more visible and at the table than, for the past decade than the decade before that. And that's not to say, "Oh, gee whiz, everyone who's work[ed] at the college for the last ten years has come with all the answers." I think an organization goes

through a development, as well as a human development. And so when the college was firstborn, they really need to take care of getting the infrastructure in place and the systems in place and people hired. And then the next phase, they really needed to get all of the financial pieces in place. And, again, continue to build on the infrastructure. Then the third phase, which I am fortunate to be able to comment during the organization's development because it also happens to be my strength, which is working with communities and people being engaged. I don't do that by myself. Everyone who works at the college is connected to the community and to businesses and to schools in the whole region. The college really has an outward perspective, what can we do to serve you, whether we're talking to, you know, [Bay] High School, [Great Lake City] High School, the elementary school right next door to us or [Plastic] manufacturer or [Aerospace manufacturer] in [a nearby city]. We have become much more outer directed of what can we do to serve business schools and US men individual[ly]. You know, what are you needing right now? Is it community education classes that would fit best for you? Or are you on a degree program? You already have your associate's degree. We have some bachelor's degrees. Can you move? Are you land locked? What can we do to help you improve your educational attainment so that you can keep moving out?

President Wilder's quote suggests that NCC has done a great deal of work in the past decade connecting to the local schools, businesses, industries, and community organizations. However, based on the findings described in chapter 4, this study has found that the connection between NCC and their key stakeholders is limited. President Wilder's quote highlights the different perceptions of the degree of connectedness NCC has with some of their key stakeholders. The next sections will review these connections even further.

K-12. NCC's connection to K-12 schools was seen mainly through dual enrollment opportunities for high school students. Representatives from the region's Intermediate School District (ISD), which assisted all K-12 schools in the region, described K-12 schools' connection to NCC as being mostly driven by the college's dual enrollment and direct credit offerings. Mr. Powers, a representative from the local ISD, stated:

We have direct credit where students are actually getting college credit while in our high school classes to give them that leg up, at no cost. We've eliminated time and distance as well and additional barriers. Plus, we've given students the chance to say, 'Hey, I can actually take a college class and do all right with this, maybe college is an option'. So those are things I think at the ISD level we certainly value...

The ISD representatives interviewed for this study, Mr. Powers and Ms. Springs, discussed the role that ISD was currently playing in the community to connect students to local industries and provide students with an opportunity to learn about career opportunities. Additionally, the ISD had programs that allowed students to travel to four-year colleges in the state for a campus visit. Ms. Springs stated, "The other thing I would say is that [ISD is] very instrumental in getting kids to postsecondary, actually taking them out of the area, because some of these kids would never be able to experience out-of-county experiences." NCC was included in the list of colleges that high school students could visit. Ms. Springs also discussed a program that they partnered with NCC on in the Spring: "We also do a nontraditional activity in the spring - it's April 23rd this year - with [NCC] so that young girls from eighth grade up can go to the college and experience other females in careers." These programs demonstrate that there is some partnering between the local ISD and NCC, but the ISD is taking a lead role in connecting K-12 students with their post-secondary options.

In addition to helping high school students understand their post-secondary options, the ISD worked closely with local businesses and industries. The ISD was doing a great deal of work to connect with local businesses and industries in the area and to use these relationships to help K-12 students get connected with the different industries to learn about their career options. The ISD had several programs and partnerships that allowed K-12 students to learn more about local industries and be introduced to career possibilities in the region. While describing these projects that the ISD created, Mr. Powers and Ms. Springs did not include NCC as a major contributor to these programs. In fact, NCC was not discussed as a major partner for the ISD. Rather, career counselors, principals, GLEC, and local industrial associations were listed as the main stakeholders the ISD worked with. Only upon being probed about NCC's connection to K-12 did Mr. Powers acknowledge their mutual commitment to furthering student's knowledge of careers in the region. Mr. Powers discussed the K-12 schools' connection to NCC by stating:

Oftentimes, and this isn't unique to [NCC] and K12, it's across the board -

oftentimes there is that disconnect between K12 and post secondary, and I think the ISD plays a pretty instrumental role in being conduit to connect them. They don't have the time or resources to go out and try and meet with 11 local districts, but we can represent.

The disconnect between K-12 and NCC described by Mr. Powers indicates that NCC relied on the ISD to help make connections to the local K-12 schools given that there were so many school districts in the region. However, NCC participants did not describe a strong connection with the local ISD. NCC participants were very cautious when discussing their relationship with the ISD and K-12 schools and did not openly discuss this disconnect.

The work the ISD was doing to connect with local businesses and industries was very similar to the work that NCC's Department of Corporate and Community Education was doing.

For example, Dean Harding, a dean at NCC, expressed some frustration with one of the school districts that had recently developed a new partnership with a four-year institution offering manufacturing courses to high school students, instead of working with NCC and their new mobile Fab Lab. This was especially frustrating to Dean Harding as the four-year institution was located outside of the local region and was a for-profit institution that was among the most expensive institutions in the state.

Both NCC and ISD representatives discussed a disconnect between K-12 and NCC curriculums. The ISD was offering several technical programs in areas that NCC did not support for students to continue their studies after graduating from high school. Mr. Powers stated:

[NCC doesn't] have construction technology, they don't have automotive, you know, there are some things that other community colleges have. I mean, I'm just being blatantly honest—that I would love to see them expand because I think those are some areas that they could... you know, would be of benefit to our community and would be a direct link to what we already offer here at the ISD. We certainly could be a feeder system, I think..."

Mr. Powers' remarks here shed light on the fact that NCC is not currently working together with the K-12 schools' curriculums in order to offer post-secondary education opportunities in areas that students may have interest in or have gained some expertise in, and this is seen as an oversight by the representatives of the ISD, contributing to the sense of a disconnect between the two organizations.

Out of the five key stakeholders identified in Chapter 4, NCC's connection to K-12 schools was one of the weaker relationships, and they do not appear to be interconnected in a meaningful way. Based on interviews with Mr. Powers and Ms. Springs, it appeared that

although they believed that NCC did a good job offering high school students the opportunity to take college classes, their connection to the local schools wasn't as strong as it could be. The ISD had a strong technical curriculum throughout the region's K-12 schools, and Mr. Powers shared his disappointment in the lack of connection between the K-12 and NCC curriculums. Although the ISD and NCC discussed differences in curriculums, there was no discussion of how they might work together in the future to provide curriculums that were better connected.

The most discussed connection between NCC and K-12 schools was the fact that NCC did offer direct credit and dual enrollment offerings for students still in high school, which meant students could earn college credit while still finishing high school. Ms. Springs also noted that she often invited one NCC employee to her monthly meetings with all the high school counselors in the ISD so that they could connect with the counselors and be aware of what was going on in terms of curriculum and advising issues. However, aside from the for-credit offerings and the fact that they had representatives sitting on similar boards throughout the community (both organizations had representatives on GLEC's board), the connection between K-12 schools and NCC seemed limited. Although NCC was working with the ISD and local school districts to provide dual enrollment and direct credit courses for students, the offering of these courses alone wasn't an indication of a strong connection. The act of providing courses to students didn't result in an outcome where NCC was well-connected to K-12 and that both entities are working collaboratively.

The importance of partnerships was a theme of a spring newsletter issued by the ISD. In the newsletter, Mr. Powers, the director of Career and Technical Education for the ISD, wrote an article about the role that partnerships played in the ISD. Mr. Powers wrote the following: "[W]ithout the cooperation and affiliation of our partners, the many great opportunities that have

been created for our students simply would not be possible." The newsletter discussed several partnerships that were helping high school students become exposed to local industries and learn about various higher education opportunities. NCC was listed as a partner on two projects in the newsletter, however, there was more emphasis put on programs in which the high schools were working directly with businesses or partnering with four-year institutions. NCC was noted as offering early college courses for high school students and was mentioned as supporting an effort to improve manufacturing prospects for the region, but no specific information about working with NCC was provided. Several times throughout the newsletter, business owners and other partners were quoted to show their support of working with the school district, however, no quotes from any NCC staff members were included in the newsletter. The information within the newsletter suggests that the ISD has many partners in the region and that local industries serve as one of their primary connections. NCC's relationship to the ISD is noted, but not described in detail, and emphasis is focused more on what students can learn about career options by taking technical courses offered through ISD programs, not through NCC. This indicates that the ISD does not view NCC as a main stakeholder; rather, NCC serves as one of many supporting stakeholders. The main stakeholders the ISD discusses in the newsletter are direct industry contacts or businesses.

While the connection between K-12 schools and NCC exhibit some tension, there was some indication that they did have at least some projects they worked on collaboratively. For example, NCC and the ISD had representatives on the board of GLEC. Additionally, the ISD had a representative on the Fab Lab committee, and planned to assist NCC in working with area high schools to arrange for the mobile lab to offer high school students their new fabrication certificate.

The disconnect between curriculum offerings at the K-12 schools and NCC and lack of interconnectedness between the ISD and the NCC demonstrate that NCC does not fit Longworth's model of a learning region in the arena of interconnectedness. If NCC and the ISD were interconnected, they would have worked together to design a manufacturing program for high school students instead of the ISD choosing to work with a four-year institution. The tension created by the lack of connection between these two stakeholder groups works against the creation of a learning region because the different education sectors are not collaborating to determine neither the educational needs of the community nor the best way to serve those needs.

Community Organizations. I perceived NCC's connection to community organizations as being driven by individual employees' personal involvement. With the exception of Professor Geller, who had only been working at NCC for six months at the time of data collection, all other NCC administrators were members of several community organizations. Dean Harding expressed that being involved in the community was an important component of her work at NCC. She stated, "We are part of lots of different community groups, whether that's Rotary, The Lions Club, or—many of us are engaged in those groups not only because we value them personally but because we see that as part of our role within [NCC]." Having only lived in the area for three years, many participants saw Dean Harding's involvement as a commitment to furthering the community. She was well known by not only members of the local community, but also by community members at the branch campuses. The only group of individuals that did not comment on her leadership in the community were the business owners. However, as an organization, NCC did not appear to be strongly connected to community organizations unless there was an employee engaged in the organization.

Both Dean Harding and Dr. Green expressed how important it was for NCC to listen to the community when they were considering new academic programs or taking on any new projects within the community. When asked if the community played a part in identifying goals for NCC, Dean Harding stated:

Oh, absolutely. The community does have a voice, and in fact that's a part even of colleges' accreditation standards is that you have to pay attention to what your community members are telling you and [NCC] is fortunate to be in a community that is—how can I say this? We can reach many of the key players in our community, in [Great Lake City], in [local city], in [local city] and in [local city], enough that then all of us together are able to tackle this broad geographic region where it's harder to reach every potential student. So, yes, we hope that there's strength in numbers and in coordination. That's the goal, at least.

Mr. Spalding, a community member at one of NCC's branch campuses, supported Dean Harding's statement of the role the community played in that he had direct impact on the expansion of the branch campus. Mr. Spalding became concerned about the growing number of students dropping out of NCC because of the long commute to the main campus and reached out to Dean Harding to discuss what NCC could do in terms of offering more classes at the branch campus. Mr. Spalding stated:

We did a little study on one group of kids that started here, and then, then when their first class came, over 70 percent of them dropped, didn't continue. Now, maybe some of them would have not continued anyway. But, we thought that was an outrageously high number. [Dean Harding] showed up, new girl in town, with great ideas. And, we began talking about this about how we could maybe make this thing better.

Mr. Spalding was instrumental in helping NCC secure their new building and continued to work with the college throughout the time of this study to help them navigate the local bureaucracy.

In summary, NCC seemed to work with the community on many different projects, reached out when developing new academic programs, and individuals from NCC served on many different community boards/organizations. However, in terms of NCC's interconnectedness with community organizations, there is room for improvement as far the level of engagement within the organization as a whole is concerned. NCC did have a breadth of organizations that they work with, however, the depth of their involvement was not observed as being as important as the amount of organizations they were connected to. Being connected to community organizations seemed to primarily involve individuals serving on boards, attending organizational meetings, and presenting information about what the college was doing. Participants described their connection to community organizations as being partners, however, utilizing Longworth's description of interconnectedness and partnerships, it is evident that NCC's relationship to community organizations were more superficial than true partnerships. Given that NCC's connection to many community organizations was driven by individual involvement and not based on job responsibilities, the relationship between the college and organization seems bound to change over time. A true partnership, like the one NCC had with GLEC, would be more consistent and not depend on an employee's individual commitment to the organization. NCC has made their partnership with GLEC a priority, and as a result have several employees engaged with GLEC as part of their job responsibilities, a model that seems likely to be successful when considering how to improve interconnectedness between NCC and other community organizations.

Industries and GLEC. Great Lakes Economic Corporation (GLEC) was a major partner for NCC when it came to connecting with local industries. The GLEC's mission stated, "[GLEC's] mission is to serve as a resource to local communities and businesses to retain and create jobs." NCC administrators acknowledged that they worked closely with the GLEC to connect to many industries in the area, and for this reason, industries and the GLEC will be discussed in the same section.

Throughout interviews and observations, it was evident that NCC's connection to local industries was largely supported by the GLEC. Mr. Rider, the Entrepreneurship Director from the GLEC, served as a connector for industry leaders and NCC. While observing a meeting of the Fab Lab committee, there were no industry representatives present. When Mr. Rider arrived at the meeting, he made several phone calls to locate the industry representatives and find out if they were coming to the meeting. Although several industry representatives were expected to attend, none showed up for the meeting. Upon interviewing Mr. Rider, it became clear that industry leaders did not often have the time to commit to being involved directly in many projects or organizations. Mr. Edwards, remind us who he is here, also discussed the limitations industry representatives had in terms of being able to provide their employees with the time off necessary to attend training sessions at NCC. Mr. Edwards stated:

I should mention, though, that in my 28 years of economic development, even though companies say there's a real need to increasing a skill level in their employees, that it's real important for them to stay competitive and that they, um, need to compete in a global marketplace and for them to retain, um, their existing workers they need to train their people in these new, advanced techniques or new technologies...and they all will say that. Very few will actually pay for that. They all will say, yes, we need it. We're going to go

out of business if we don't have this training. And so the only time there's really a glut of training is when there's state subsidies available to offset the cost for their training. And there hasn't been any funding for companies, um, for the last 10 to 12 years but now just this year for the first time, they've [the government] set aside \$10 million for training and so now all these companies go, "Oh, we need training. We need training. We need training." And so, I just think it's odd, you know, that they don't put a high value on training. They will gladly go out and buy new equipment, but their people don't really, completely use it to its full capability because they won't spend the money on the training.

And so that's always struck me as odd that they, um, don't put a high priority on training.

This quote also highlights the fact that that, even if NCC wanted to be involved in a partnership with local industries, it may not be possible if the local industries were not willing to commit the time necessary to develop a strong partnership.

NCC has been a member of the GLEC board for nearly three decades. When asked what NCC brings to the partnership with the GLEC, Dr. Green stated:

I think we bring—well, I think first and foremost, we listen. Because, as I was saying before, we have to listen to the part to the end of the pipe that says this is what employers are telling us that they need. So, if we're just staring at our navels up in our little ivory towers, not listening to the workplace, wouldn't have any way to know that our curriculum is providing what the workplace wants.

Additionally, Mr. Rider noted that NCC's relationship with the GLEC has become stronger in the past year and a half. He stated:

It was probably just a year, year and a half ago, [that NCC] became a core partner with [GLEC]. We have our core partners on our business card. And a core partner really

creates a closer relationship, which I've been happy about. I think the technical part of being core partner means they're giving us a little bit of funding to operate, and that's what entitles them to be called a core partner. But in reality, it creates a closer relationship and more opportunities to collaborate and work together on a variety of projects.

NCC's relationship with local industries seemed to be supported mainly by NCC's Department of Corporate and Community Education and by the GLEC. The NCC administrators, Dr. Green and Mr. Edwards, worked with industry leaders on a weekly basis to support their companies through educational trainings for current employees and by supplying an educated workforce with new students graduating each year. NCC put a lot of effort into reaching out to industries and designing important trainings that were needed for their companies, yet there was little reciprocal commitment to NCC from local industries.

As the Associate Dean of Occupational Programs, Dr. Green worked closely with the local hospital and assisted in determining how the college could provide the training that the hospital needed. An example of an academic program that was needed in the area was a surgical technician program. When the hospital came to Dr. Green and asked that a program be created, Dr. Green said that it wasn't financially possible for the college. The college would have to build an operating room for the students to use during classes, and that cost was not something the college would be able to afford. The hospital proposed that the class be allowed to use one of their operating rooms at night when there wasn't a huge need for the room. With this offer, NCC was able to create a surgical technician program and has since had many graduates go on to get jobs at the local hospital, as well as positions in other areas of the state and country.

The GLEC, and Mr. Rider in particular, worked with NCC administrators to discuss ways that the college could support new economic development opportunities for the region. The Fab Lab was the perfect example of how the GLEC had an idea to provide new trainings in manufacturing that would not only help the current manufacturers in the area but might also attract some new companies to the region. Mr. Rider brought together key stakeholders, including NCC, to discuss this idea, and eventually that group became the main committee driving the project forward. President Wilder noted that the development of the Fab Lab changed NCC's relationship with the GLEC. She stated:

And it is really with the movement towards the [Fab] Lab that that relationship really became solidified. No, I shouldn't say that. It became much more project-driven. Because the relationship has always been there, and we have always been at their table. But now we are committed to this project, and [GLEC] has been a major driver, and we could not have moved forward at the speed that we did without them.

Mr. Edwards talked about how NCC works with the GLEC when addressing issues that manufacturers or other businesses may be having. He noted:

A lot of times, um, they [businesses] have issues but they don't know who to talk to, to help them, help them with those issues... so these stakeholders, we have retention visits with various companies and we talk about what their needs are. Sometimes it's infrastructure and sometimes [the state economic development corporation] can help. Sometimes it's [GLEC] writing grants for, a new water line, for example. Or sometimes it's an education need, that their people need some advanced skills to stay competitive and so then the educational component comes in.

This quote highlights the one-directional relationship NCC has with local businesses in that they provide services to businesses and industries in the area; however, the college's commitment is not reciprocated. Additionally, business owners noted the GLEC was the main entity working with businesses to both bring in new industries and expand existing ones. NCC faculty/administrators also continuously stated that the GLEC played a large role in connecting with local businesses, and Mr. Rider would often come to NCC when they needed assistance in getting a company new training or other educational needs.

Overall, NCC's connection with local industries and the GLEC have been long-standing relationships that have fluctuated over time. NCC's connection to local industries seems dependent on state and federal funds to provide training. However, NCC had partnered and continued to partner with manufacturers in the area to provide workforce development for their employees, and they often met with industry leaders to ensure their curriculum would provide students with the education and training needed in order to be successful post graduation. NCC's relationship with the GLEC became significantly more active since the development of the Fab Lab. NCC leaders described how positive the experience had been and hoped to be more involved on projects with the GLEC in the future. NCC and the GLEC were the leaders that made the connections with local industries, and they worked together to assist the industries in whatever way possible.

NCC's connection to the GLEC was perhaps the most significant relationship unearthed in this study. In terms of being interconnected, the GLEC and NCC were strong partners that appeared to work together in order to provide training suited to employers' needs and new opportunities for students. In addition, both NCC and the GLEC discussed the importance of changing the negative perception of manufacturing that the community had because of the 2008

recession. Many manufacturers had to shut down after the economic downturn that began in 2008, which left many community members with a negative perception of manufacturing and its viability in the region. This idea of promoting a change of perception, not just providing training, is consistent with Longworth's notion that it's not just about training and education but that we must be willing to improve all aspects of our community in order to form a true learning region, which includes community morale.

Government Agencies. The data revealed four different government representatives that had worked with NCC: the state economic development corporation, a state workforce development agency, the local City Manager, and the City Manager at one of NCC's branch campuses. NCC's interconnectedness with government agencies was described by NCC leaders as being very important in order to assist in retraining displaced workers and receiving state funds in order to support these trainings. Additionally, the government representatives were also key partners in achieving important progress for NCC's campus and their relationships with the local community, as well as local industries.

There were two state organizations that NCC leaders noted were important partners. First, Ms. Cooper, a representative from the state economic development corporation, played a significant part in securing the funding for the Fab Lab. It took the Fab Lab committee over a year to figure out a way to fund the lab, and Ms. Cooper played a critical role in securing state funds, which ultimately allowed the lab to move forward. Many grant applications were submitted and rejected for the Fab Lab. In the end, Ms. Cooper was able to assist NCC in navigating a complex funding process through the state economic development corporation, and if everything turns out as expected, NCC will essentially be reimbursed in a couple years for the cost of the Fab Lab. However, NCC does not expect to receive funds to cover many costs that

were not included in the initial start-up costs, such as the cost of a faculty member to run the program, supplies, and even gas, taxes, and insurance for the mobile lab that will be continually occurring costs each year. NCC has committed to covering these annual costs and any other costs that may arise that were not anticipated.

The second key state organization that NCC worked with was a workforce development organization that was funded by the state and that interfaced with colleges and industries to financially support workforce development trainings. NCC worked with this organization through the Corporate and Community Education department to assist in funding crucial trainings for students to be able to reenter the workforce. NCC worked more closely with the workforce development organization than the bigger state economic development corporation due to their more regular interaction in assisting local residents who desired to receive new training. However, both organizations played an important role in supporting NCC's mission of community improvement. While NCC worked closely with these two state entities during the time of the study, the relationship was heavily dependent on state funding availability, which limited their overall connection to NCC.

Overall, the local government was very disconnected from NCC. In terms of partnering with NCC, the only project mentioned was the recent road expansion, described by Dean Harding and Mr. Carson as the most recent example of NCC's collaboration with the local government. The road expansion had been completed several years ago and was paid for by the city. The only reason NCC was involved was due to the fact that the road needed to run through some of NCC's property, so the city needed approval from the college. Aside from this example, no other connections between NCC and the local government were described by participants. Mr. Carson did share his thoughts on what NCC contributed to the community. He stated:

[NCC] goes out of their way to make the recreation facility open to a wider population of people, which I think was a pretty smart move in terms of the general public support for the college. They've gone out of their way, for example, to promote artwork they have on their campus as being available for the general public, not just for college students. And they do this community cookout every fall. I think these things may seem kind of trivial but they help frame the perception of the college.

Mr. Carson's quote describes NCC as providing important services for the community, whether it is education, training, or providing a health and fitness center. His quote also shows that he views NCC as supporting some of the important characteristics of a learning region, such as commitment to improving the community's health and education and providing cultural activities. Mr. Carson also commented on the new Fab Lab and mentioned how it had the potential to truly expand NCC's offerings into other areas. Mr. Carson hoped that the Fab Lab concept would be translated to other areas within the community that could benefit from a similar solution. Mr. Carson noted welding as one example, stating that the community was in need of trained workers but that NCC currently doesn't offer any training in welding.

NCC's connection to the local government was also observed at one of their branch campuses. NCC's newest branch campus had only been open for one year at the time of data collection. While observing a meeting, I watched as the city manager, Dean Harding, Ms. Anderson, and Mr. Spalding discussed an important issue. This was the first time anyone from NCC was meeting with this particular city manager, and Mr. Spalding, a very active community member, was there to introduce them and help discuss a street lighting issue around the building NCC was leasing at the time. The city manager was attentive during the meeting and listened to what Mr. Spalding, Ms. Anderson, and Dean Harding had to say. They were hoping to gain

some financial support from the city to assist in adding some lights in the parking lot near NCC's building. The city manager was hesitant to give support, as the city did not have the extra funds to put towards such a large and expensive project. He did agree to bring it up at the next city council meeting, and he also invited Ms. Anderson to give a presentation about what NCC was offering at their new location along with any other important updates from the college. Ms. Anderson noted in her interview that she hoped to give these types of presentations regularly so that she could stay connected to the community. NCC had been offering courses at this particular branch campus since the 1970s. Although they had never operated out of their own building before, their presence was consistent within this particular city. However, it wasn't until a year after they had their own building and ran into a street lighting issue that they'd met with the local City Manager. Their relationship with the branch campus's city government appeared to be similar to the relationship they had with the city government at their main campus. Interaction was intermittent and need-based only.

Aside from Mr. Carson needing NCC's approval for the road expansion, there were no other examples given of when a government agency sought out the help of NCC for a project, program, or partnership. When asked what NCC's biggest contribution to the region had been, Mr. Carson was unable to provide an answer and said he wasn't familiar enough with their offerings. He did acknowledge that NCC had expanded in the past few years with the added branch campus. Mr. Carson also observed that their role in the community had not changed since he came to the area five years before the time of this study. All of the government agency representatives interviewed for this study discussed ways in which NCC had asked for assistance on various projects, but that relationship did not seem to work both ways.

Business Owners/Managers. At the time of this study, Great Lakes City was known as an attractive resort community and traditionally brought in a lot of tourists throughout the summer months. The downtown area was home to dozens of family-run businesses and void of almost any commercial chain restaurants or stores. Many of the downtown businesses were gift shops, clothing stores, and small cafes or restaurants serving local favorites that attracted lots of tourists during the summer months. Twenty-five business owners were interviewed for this study in order to include their perspective on the role that NCC played in the community and in order to determine how connected NCC was to the local businesses.

Out of the 25 business owners/managers that were interviewed as part of the random sample, 14 of the owners/managers had either partnered with NCC for an event or attended a business lecture series sponsored by NCC. The remaining 11 owners/managers had never attended an event at NCC or partnered with the college in any way. The number of years each business had been operating did not seem to impact whether or not the owner had been connected to NCC. Out of the 11 owners that had never worked with NCC, the years their businesses were open ranged from 2 years to 56 years.

When business owners were asked how they viewed NCC's role in the community, 22 out of 25 respondents said the college played an important role in the community in some way. Some of the 22 responses included: offering higher education at a discounted price, providing workout facilities for the community, assisting businesses in training their employees, and responding to the needs of the community. One respondent noted the college was a vital entity for the community and stated, "[NCC is] part of the ground you walk on." There was only one comment made by a business owner that was negative in regards to NCC's role in the

community. An owner of a shoe store stated, “Unless you are in the college, they don’t play much of a role in the community.”

Business owners seemed knowledgeable about some of NCC’s offerings for the community, but they were not very confident with their knowledge about their academic offerings. Their knowledge was focused more on the recreational facilities and knowing about the business luncheon series that they offered. One business owner commented, “[NCC] is very responsive to the needs of the community and provides recreational facilities for the community.” This business owner also noted that NCC provides meeting space for community members and organizations and hosts community events such as the annual Boat Show.

NCC views local businesses as an important group that the college should connect with. President Wilder, NCC's current President and President of the local Chamber of Commerce, stated:

I've been on the chamber board this year. I happen to be the president of the board. So I have conversations with business people in our community all the time. And I'm really open and up front. You need something? You need training, development, you call us.

We have wanted to make sure that people understood we're here to serve. And we want to know what you need so that we can deliver it.

It is important to note that in this quote President Wilder states that business owners can seek out assistance, however, she does not discuss any type of outreach the college is doing to connect with business owners. In fact, aside from a couple of manufacturers and the local hospital, none of the NCC participants described a time when NCC reached out to local businesses.

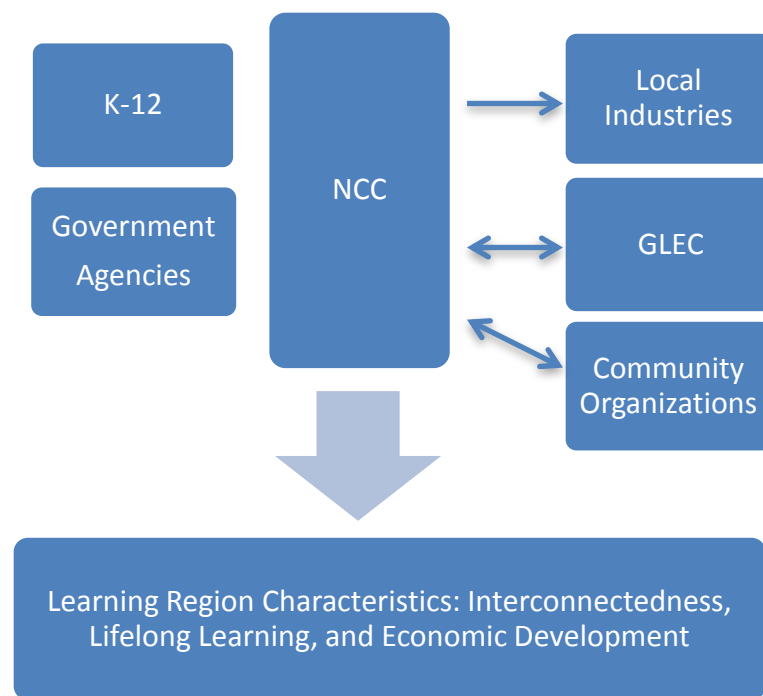
Participants almost exclusively noted that Mr. Rider from the GLEC served as their connection to local businesses.

Based on the interviews with business owners, it was clear that unless an owner needed a specific training there was limited knowledge of NCC and its offerings. Those who had attended a business luncheon series offered by NCC were more knowledgeable about NCC's offerings and how the college could assist business owners. The relationship between NCC and business owners seemed to be situational, similar to NCC's relationship with the local government. Although the college talks about the importance of the local business owners, the college's connection to them is minimal and usually enacted through routine business luncheon offerings. Many business owners had not previously thought about how NCC may or may not have played a role in economic development for the region, but many did acknowledge that the college had played some kind of role in economic development by offering higher education at a discounted rate compared to four-year institutions

Summary. Overall, the connection between NCC and the five key stakeholders identified in this study occurs in many different ways, including sponsoring business luncheon series, hosting trade shows for businesses, bringing in high school students for dual enrollment, working with industries in the region to offer relevant trainings for their employers, and having NCC staff serve on many community boards throughout the region. Participants did not acknowledge that the college had any relationships that were weak or needing improvement, however, throughout data collection it was clear that NCC's connection to their partners was not consistent and was often strongest when the college had a specific project they were working on. NCC's relationship to the identified stakeholder groups cannot be defined as being interconnected based on Longworth's definition. While many interview participants used the terms "partner" or "stakeholder," there is some indication that even key partners for NCC are not as connected as is ideal for a learning region. The degree of interconnectedness exhibited by

NCC is largely based on their current projects, which are only taken on if the project passes the college's cost-benefit analysis. Figure 5 shows the connections between NCC and the five key stakeholders based on the findings. There are no arrows connecting NCC to K-12 schools and government agencies, as there was limited to no connection among these entities. NCC did reach out to local industries, providing them with customized trainings. However, since local industry leaders did not appear to reach out to NCC to collaborate on projects and because they were non-responsive to inquiries to participate in this study, the arrow connecting NCC to local industries is one-directional. The study found that NCC's most involved stakeholders were the GLEC and community organizations. These connections are shown with arrows connecting both stakeholders to NCC, as they are in a mutually beneficial relationship. Using Longworth's learning region model as a comparison, an ideal connection between stakeholders would be a mutual relationship in which both entities worked towards making a strong connection and working with each other to improve the community. NCC's relationship with the GLEC and community organizations were the only connections that meet Longworth's definition of interconnectedness.

Figure 5: Learning Region Model for NCC



Challenges of Interconnectedness. There were two main challenges to interconnectedness that emerged throughout the analysis of the data. First, the level of connection was not consistent among stakeholder groups, and interconnectedness seemed strongest when there was a specific project NCC was working on with a partner or partners. The relationship between NCC and GLEC was discussed by all participants in the study and was referred to as an evolving relationship that has grown significantly with the development of the Fab Lab. NCC's relationship with K-12 schools and local government was discussed much less frequently throughout the interviews, and once again these relationships were also discussed as being more project-driven than ongoing sources of mutual support and engagement. As previously noted, K-12 schools and NCC also suffered from disconnected curriculums, which could be an influence in their relationship's lack of strength.

The second challenge to NCC's ability to connect with the community was that NCC administrators and faculty also served as leaders in many local community organizations. This could be seen as both a positive and negative in that it could help NCC be connected to more community organizations, however, it limited the amount of people engaged in building the relationship between NCC and the community. For example, President Wilder served as the President of NCC and the President of the local Chamber of Commerce. NCC participants serving as leaders of several organizations throughout the community was a common finding among the data and was referred to many times; since a rural community has less people, it is common for leaders to hold many different positions in the community. No one in the study discussed this as being a negative aspect of NCC's relationship with the community, however, when looking for interview participants for my study, it was difficult to identify more leaders than the 14 that were initially selected. During each interview, I asked participants to identify key leaders in the area that were working towards improving economic development for the region. Participants continuously identified Dean Harding and Mr. Rider as the primary leaders who are actively engaged in building economic development opportunities for the region.

President Wilder stated:

I would have to credit [Dean Harding] with what the new center [at branch campus], the Great Lakes center. We have been in [location] for eons, and probably would still be chugging along at the same rate. But there were some—a new business opportunity and this Great Lakes center, and there was good conversation, good synergy, right place, right time.

Although there were many challenges to interconnectedness for NCC, it appeared that they were making some progress towards connecting with as many stakeholders as possible. At times they

needed to make difficult decisions that might limit their connection to certain businesses. For example, as mentioned earlier, NCC's hospitality program was well-established many years ago, but due to limited enrollment the program was discontinued. Around the time of the study, Dr. Green was approached by the local casino and asked to once again offer a hospitality program. After doing an analysis of what the program would cost, how many students would potentially graduate each year, and how much a certificate or degree would increase a student's salary options, NCC determined such a program would not be beneficial to students or financially beneficial for the college. Although hospitality was one of the biggest industries in the region, the employers in the area did not view a degree in hospitality as being a necessary characteristic for employees and were not willing to pay those students more money after earning the degree. With a high proportion of summer workers coming from other areas of the state, a hospitality program did not make sense for NCC. Dr. Green acknowledged that by not offering a hospitality program it had negatively impacted their relationship with the casino and other employers who had also inquired about a hospitality program. NCC was limited in the amount of programs it was capable of offering to students, so it was essential that they selected programs that would benefit the community but also ensure the students were gaining education that would increase their standard of living.

Being interconnected, according to L-----'s definition, means having all stakeholder groups working together for a common goal. For NCC, interconnectedness was not seen through an overall common goal. Rather interconnectedness occurred most often on a project-by-project basis. NCC was well connected to the GLEC, a local manufacturer, and K-12 schools through their new Fab Lab, however, without the Fab Lab or some other project, these relationships would likely not be as strong.

Lifelong Learning and Investment in the Individual

Lifelong learning was described by Longworth (2006) as "the development of human potential through a continuously supportive process, which stimulates and empowers individuals" (pg. 62). Longworth also noted that lifelong learning goes beyond simply learning skills and knowledge one would need in their lifetime; he also emphasized that one must apply their knowledge. This definition serves as a guideline for analyzing how NCC viewed lifelong learning over the course of this study.

Study participants described aspects of lifelong learning throughout their interviews; however, the specific term *lifelong learning* was not used directly. The concepts of lifelong learning and investing in the individual were seen in four main ways throughout the data: NCC's community education department, NCC's health and wellness programs, industry training, and the development of branch campuses.

First, it is important to note that NCC's Department of Corporate and Community Education (CCE) had changed in a fairly significant manner since the economic downturn of 2008. Prior to 2008 the department was called Institute of Business Industrial Training and primarily provided training to businesses throughout the region. However, once the recession began in 2008, there was significantly less state and federal funding available for colleges to receive in order to provide manufacturers with training. With less funding available and limited interest from employers willing to pay to train their employees, the college refocused its efforts on community education. Now the department has dozens of course offerings for community members, which range from "How to Use Your iPad" to "Microsoft Excel Basics" to "Harvest and Crunch Best Practices" (grape handling).

While the CCE department does still offer trainings for businesses and manufacturers by offering workshops and customized trainings, the community education offerings are the main focus of the department now. Mr. Edwards discusses the transition the department undertook after the economic downturn in 2008. He stated:

We didn't do any of that [community education]. All we did was customized training exclusively. We didn't have time to do anything else or even think about anything else. And [coughs] since the downturn, we've had to look at other revenue streams and so that's when we started pursuing the Community Ed programs and Continuing Ed. In addition to the in-class Continuing Ed class, we also offer a lot of online classes and so we've kind of grown in that direction.

The expansion of NCC's community education offerings supported the concept of lifelong learning, as they were promoting the continued development of their citizens through their offerings.

The second key way NCC was contributing to an investment in citizens was through their health and fitness facilities. NCC offered community members a free membership to the gym located on campus. Additionally, the college had several trails that were used by the community throughout the summer for walks and hikes. Business owners were well informed about this service that NCC offered and often noted it as NCC's main contribution to the community. There was also a significant sculpture art collection on campus that attracted community members and was donated by a very active community member. Because NCC provided health and fitness programs and art sculptures that were free and open to the community, they were supporting the holistic development of the individual, an important concept of lifelong learning.

Physical fitness and cultural enrichment activities such as art exhibits are included in the definition of a learning region.

The third key way that NCC was contributing to lifelong learning was through their commitment to provide continual training for industries in the area. The creation of the Fab Lab was the most significant example for their commitment to lifelong learning. The college fronted over \$300,000 so that development of the lab could move forward and training could begin. As mentioned before, the state economic development agency will only provide the funds to cover the \$300,000 investment if NCC's industry partner hires 30 new employees over the next two years. If the company does not follow through by hiring 30 new employees, then NCC will not be reimbursed for their financial output. Although NCC may not be able to create a program like the Fab Lab for every type of industry, their stated goal was to provide programs that would give students an opportunity to advance their careers within the region. The funding structure for the Fab Lab has left NCC at risk of not receiving the state financial support. All of the NCC participants described this as a nerve-racking process, however, NCC was completely committed to the Fab Lab, otherwise they would not have fronted the money. A mobile lab that was designed to train everyone from high school students to adult learners and industry workers is a great example of a lifelong learning tool provided by NCC. The Fab Lab has the potential to reach a diverse population and bring new knowledge into the community that fits the current needs of the manufacturers within the region and state.

The fourth way in which NCC demonstrated support for lifelong learning and invested in the community members in the region was through the development of two branch campuses. At the time of the study, NCC operated two branch campuses in addition to their main campus in Great Lake City. The older of the branch campuses was located at Lake View City in a

community university center, which also housed another community college and several four-year institutions. The university center was designed to allow students throughout the region to be able to complete a degree without having to travel the significant distances to the main campuses of the colleges. In some instances, the colleges in the university center would be several hours away by car. Although NCC was just one of many colleges at the university center, they do attempt to connect to the local community by offering a lecture series.

While there was limited evidence of NCC's commitment to lifelong learning in Lake View City, it was clear that NCC had a deeper connection to their newest branch campus and had stronger relationships with the community members than at the campus located in the university center. Mr. Pablo, the Executive Director of the University Center, was not knowledgeable of NCC's offerings and did not view the college as playing a major role in the community. In fact, Mr. Pablo noted that NCC's tuition was the highest among all of the colleges at the university center and among the highest tuition for any community college in the state. Mr. Pablo noted that NCC's high cost did deter some students, who were unable to afford the higher rates than other colleges within the university center.

NCC's commitment to their community was primarily seen in the expansion of NCC's academic offerings at the branch campus and university center and the involvement of Ms. Anderson in the community. Although there were not several employees at each branch campus location, Ms. Anderson's work was appreciated by community members, specifically at Midwest City. Mr. Spalding, a community member at Midwest City, described the important role Ms. Anderson had undertaken in getting the branch campus up and running. Mr. Spalding stated, "She's phenomenal, she is the—she's got a rapport with the kids that is wonderful. She's, she's got, got [Midwest City] stamped on her back, I think, because she's, she is very supportive of this

thing. And, she really is one of the keys to making it happen." For Mr. Spalding, and the local community at Midwest City, NCC's presence had significantly changed with the addition of their own building and the presence of an employee there to help the students and to make connections within the community.

In summary, although the term lifelong learning was not used in the data, the concept appeared to be present in many ways. NCC had programs in place that were designed to improve the quality of life for many community members in the region, not just students. The creation of a health and fitness center, bringing a large art collection to campus, expanding branch campus offerings, and offering new and innovative trainings to local industries were all ways that NCC was supporting lifelong learning. Lifelong learning was present in NCC's offerings to the community; however, it is important to note that the concept was not seen outside of NCC. For example, the GLEC, K-12 schools, and business owners did not talk about lifelong learning or note any ways in which learning opportunities were present in the community outside of NCC's academic offerings.

Challenges to Lifelong Learning. Lifelong learning does not come naturally to NCC, and it was clear through my observations that they spent a great deal of time thinking of ways to reach out to the community and enhance their offerings in a way that would be beneficial to the local residents. Two main challenges to lifelong learning broached by NCC participants were the community mentality about higher education and the cost-benefit analysis NCC must do when considering new programs or projects.

Although NCC has many offerings for local residents to engage in educational opportunities, respondents noted that higher education was not seen as a priority in the area. Dean Harding stated:

The lack of priority in the region on higher education... When we look at [NCC] and we say, "Well, we want students in the region to see us as a destination," if they don't come to [NCC], where do they go? Well, the answer is that 53% of graduating students in this area don't go anywhere to college. They don't go to higher education.

Dean Harding continues by describing how this lack of priority on higher education also limits NCC's role in workforce development: "So when we think about workforce development, we need to factor in, that for our population, going to college is not seen as necessarily the way to get workforce development." The lack of interest in higher education was also seen among business owners, as many of them were unaware of any services that NCC provided for the community or services that might benefit them as a business owner.

The second major challenge to lifelong learning and investing in citizens was that in some instances such an investment could be a waste of time and money. NCC has cancelled programs that could not be sustained with such a small population, with hospitality being one example. In addition to cutting programs due to low enrollment, NCC has had a difficult time working with some industries to provide technical training when there are not state or federal funds available to pay for the training. Mr. Edwards discussed that managers at the local manufacturing plants would love to have their employees receive more training, but they are often not willing to pay for the training. Time was another factor for employers when it came to training their employees. Particularly for manufacturers who have three shifts of workers, it was not always possible to arrange for time away from their work to go to the college and receive training. One of the major attractions of the Fab Lab was that it was a mobile lab that could drive right to the manufacturer, and employees simply had to walk outside to get trained. This cut the time commitment down considerably and made it easier for employers to provide training

on the job site. Whether or not the Fab Lab will be a means to overcoming this challenge is yet to be seen.

Although NCC was faced with some challenges in providing lifelong learning opportunities, they continued to think creatively to find ways to reach as many citizens as possible. Ms. Morris, a community member at the newest branch campus in Midwest City, said that the development of the new location was a huge success for the region. She stated:

I think it has given learning a focus. I think it has created excitement. I think it has created opportunities for our kids. I mean one of the kids ... I've been around a mentorship program through Rotary. And one of the kids that was in the program last year happened to be my mentee, and she won a full one-year scholarship to [NCC] that was sponsored by the Rotary. And she was able to enroll and take all of her classes this semester in [Midwest City].

This example, in particular, demonstrates NCC's desire and ability to improve conditions for lifelong learning in the region, even when the answers are not simple or able to be implemented immediately.

Overall, NCC seemed committed to continually adjusting its course offerings and finding ways to work through issues when it came to reaching out to industries. Their ability to expand some aspects of lifelong learning will likely be limited due to having to conduct a cost-benefit analysis. With limited resources, NCC could not run academic or community programs with low enrollments. They needed to be able to justify the expense in order to keep a program running, which likely impacted the types of lifelong learning activities they were able to provide.

Economic Development

The final characteristic of a learning region that was examined in this study is economic development. Having an economically healthy community is a key aspect of Longworth's learning region framework. All participants were asked questions about the role that NCC plays in economic development. The goal of these questions was (a) to learn how NCC defined economic development, (b) identify what steps they were taking to improve economic development for the region, and (c) see how the community viewed NCC's role in advancing the economic opportunities for the region.

First, NCC leaders were asked how they defined economic development. Dean Harding defined economic development as "fostering opportunities that support a sustainable way of life for citizens." Dr. Green talked more specifically about what economic development looks like for the region. He stated:

First, I would say economic development in our region is still trying to recapture what was lost in 2008. It's not moving forward by recapturing ground. There is a push to find new ways to bring economic development to the region, bringing manufacturing to the region. It's a teeter totter. A balance between capturing what we once were and finding an elusive magic bullet going forward.

As demonstrated by these statements, community leaders primarily view economic development as creating and sustaining jobs and industries throughout the community that are long-lasting and will provide a good quality of life for their residents. Dr. Green's quote also highlights an important concept found within the literature on economic development in the 21st century in that communities must think outside of the norm and think creatively to develop new sources of jobs for the community.

It was apparent as a result of the information collected that NCC took several steps to engage in economic development throughout the region. Participants primarily mentioned NCC's connection with local industries and their membership within the GLEC as examples of their involvement in economic development, as well as the college's ability to create programs and trainings that were intended to aid some of the key industries in the area.

One particular example of industry connections leading to economic development was NCC's relationship with the local hospital. Dr. Green, one of the administrators at NCC, spent a great deal of time working with the hospital, as it was one of the main industries in the region. Many business owners in the random sample also listed the hospital as one of the biggest employers for the region. Specifically, nursing was in high demand in the region and country, and the local hospital had a significant amount of NCC graduates working as nurses. Dr. Green and Dean Harding both commented that NCC's relationship to the hospital was very important and mentioned that they were continually evaluating their allied health programs to ensure the hospital was satisfied with the training the students received.

Economic development through industry partnership was also demonstrated through the Fab Lab. Dean Harding noted that one of the main goals [NCC] had with its partnership with the GLEC and the Fab Lab was to "continue to find ways to bring industry, business, and education together." Dean Harding discussed partnerships as being key to moving forward on projects like the Fab Lab and necessary to bringing in new economic development opportunities for the region. The partnership between NCC and the GLEC was the main partnership that participants referred to when discussing economic development. While some participants acknowledged NCC did play a role in economic development, a majority of participants believed that the GLEC was the major driver of economic development for the region.

Given that many of the businesses are family-owned and have been in the community for several decades, it was important to include their voices within this study to learn how the community viewed NCC's role in economic development. When business owners were asked about NCC's role in economic development, there was limited knowledge as to what, if any, role NCC played in economic development for the region. Some respondents were aware of the GLEC and noted that they played the biggest role in bringing businesses to the area and also helping businesses stay in the area. However, a majority of respondents did not know of any ways in which NCC contributed to economic development for the region. A common response among business owners was *"I had never thought about NCC in that way."* For those that had viewed NCC as playing a role in economic development, a common response was that NCC provides vocational training to help people get jobs. One respondent did assert, "NCC is trying to do more for the region in terms of economic development." The respondent went on to say that NCC's new Fab Lab and sustainable farming programs were examples of new economic development opportunities for the region.

While some college leaders viewed NCC's role in economic development as vital to the community, a majority of participants noted that the GLEC was the primary organization working to bring new businesses and help sustain current businesses in the region. President Wilder, NCC's President, commented on the partnership between NCC and GLEC and how important it was for them to work together to continually bring in companies and provide training that will advance the community. President Wilder stated:

Well, one is to have a trained workforce in place for there to be economic growth in our region, for us to be ahead of the 8-ball, which means that the next thing that there needs to be training in the region, we know about it in advance, as opposed to, for instance, the

[Fab Lab], we're really playing catch-up. I mean, these companies needed these employees trained and hired yesterday. Hopefully, we will be ahead of the curve for the next big thing. But you have to have a relationship, I think, that's pretty flexible and where both partners are committed to improving the region and not necessarily in gaining accolades for their organization. I could care two hoots and a holler who gets the credit for what. I just want to make sure that things get done.

Throughout the data it became clear that NCC did not put a lot of time into marketing their successes. In fact, both Dean Harding and President Wilder commented that an average citizen in the region probably was unaware of any economic development efforts done by the college, which adds some perspective to local business owners' perception of the college as a major player in economic development. NCC has been more focused on working with their partners and going directly to specific industries or businesses that need assistance than placing energy into creating good PR about their institution.

In terms of economic opportunities for the community, another common topic discussed by NCC was workforce development. However, Mr. Powers noted that the region was behind in terms of training a workforce for the region, and the schools (K-12 and higher education) needed to step up to get individuals trained. Mr. Powers stated:

We feel that we have an opportunity, number one, to retain our folks, keep our folks here. Many of the young people that leave high school have a chance to stay here and make an honest, great earning wage, be tax-paying citizens and live a good life. I mean, the quality of life up here...that's the one thing we have, a tremendous quality of life. The other thing is we now have an opportunity to attract folks to actually work here and...we have other businesses that would like to come to this area. We've got the quality of life, we've

got the resources; the thing that we lack, and it's a good problem to have if you're in our business, but we don't have the skilled workforce. So what a wonderful opportunity for us to try and be a piece or a component of that. To me that's really the big, big picture of what we have the opportunity to do here, and when our businesses talk about the millions of dollars they turn away every year, of work that they can't do.

Based on participant interviews, it became clear that NCC had struggled to identify which workforce development trainings would be most beneficial to the region. Also, given that a lot of the workforce development was supported through state subsidies, NCC was limited in what kind of trainings they could offer, when they could offer them, and even how many people can go through such trainings, which impacted their overall efficacy in this region.

Another important aspect of economic development that was discussed throughout the study was how the economic downturn that started in 2008 impacted NCC's role in the community. Dean Harding stated:

Well, you know, the downturn for many community colleges brought a lot of students that we would not otherwise have seen because there were all the [state subsidies]. And so, having those students on campus I think was a wakeup call for many community colleges to say, "Ah, not every student is going to transfer, and somehow we need to meet the needs of students who want to go back into the workforce." Surprisingly that has been a large percentage of our population for a long time, but the colleges usually focused on being a transfer institution, up until I would say the last five to six years. I would say that I am more inclined to do program development and take the college into some new areas than may have been the case in the past. And to some degree, having the right people at the table, there's a bit of kismet that happens, and I think that we have

good partners... You know, [Mr. Rider] and I working together are more willing and inclined to say, "Oh yes, let's try that, let's try that." Not in a frivolous sort of way, cause you have to think these things through, you don't want to just waste money, but in a way that's going to invest time and resources, and I think that we've been successful in that.

In this way, it's clear that NCC has engaged with the economic downturn with the intention of developing the economic potential of each student, rather than focusing only on those intending to transfer to four-year institutions. In addition, the college's willingness to be flexible and try unconventional solutions demonstrates their commitment to developing the workforce, although the efficacy of any of these initiatives is outside of the realm of this study.

NCC participants also frequently discussed the importance of the college being up to date on technical trainings that were relevant to the community's needs and recognized that those needs were continually changing. There was a strong desire for the college to stay ahead of the changes. Although hospitality was one of the main industries in the area, NCC did not provide trainings or any type of education that would assist that particular industry during the time of data collection. A primary reason for their lack of programming was that NCC was forced to do a cost-benefit analysis when creating new programs or considering a new partnership due to their limited resources, which included a lack of funding and a lack of personnel. Also, given that NCC was a public college and received some funds through local taxes, it was important that they were developing programs that would utilize the funds given by the local residents in the best way possible. It was clear throughout the interviews that NCC relied on the GLEC for a significant amount of assistance in terms of helping improve the economic outlook for the region. NCC did do some work in this arena through their Department of Corporate and Community Education, however, since government assistance has dwindled for companies to

provide new training, the department was focusing primarily on their community education programs.

Challenges to Economic Development. The main challenge to economic development discussed by participants was a lack of resources. Lack of resources was defined in many ways, from lack of funds to a limited amount of people living in the area. Dr. Green mentioned that, for NCC, finding faculty members that were qualified to teach in certain programs could be a huge challenge. When a faculty member left the college, the class or classes they taught might not be offered again if NCC couldn't find a replacement. NCC hired mostly adjunct faculty, which also limits the hiring pool to those who are able to teach on a part-time basis. Recruiting and retaining quality instructors was a big challenge for NCC and greatly impacted which programs they could offer.

Mr. Rider also talked about the challenge of bringing together many different rural communities to work towards improving economic development, rather than just working with one community. The distance between the surrounding communities of Great Lake City ranged anywhere from 10 to 50 miles, which made it difficult to collaborate with each people in the varied communities, especially when adding in commute time for a meeting. The GLEC worked with many counties throughout the region, and Mr. Rider noted that each county worked a little differently when it came to economic development, further complicating the situation. He identified one community as being far ahead of the other counties because “in this county I just think it's more of attitude and working together and not one person necessarily.” He went on to mention that there was another county right next door that worked completely separate and did not want to collaborate with the GLEC or anyone else, and that county was struggling in terms of economic development. Part of Mr. Rider's role was knowing how each community worked and

being able to navigate how to help them given their unique issues and way of handling economic development. This appeared to be one of the main reasons NCC often referred to the GLEC when discussing new programs or projects, since the GLEC worked with a diverse group of community leaders in the region and would have a better understanding of how each community might respond.

For NCC, working towards improving the economic opportunities for their students and community members isn't as simple as improving educational offerings. Partnering with many stakeholders throughout the region to discuss trainings for employers, developing new programs, providing lecture series to business owners, and serving as a sounding board for any and all ideas that might be suggested are critical steps NCC has to take in order to assist the region in economic development. Being able to analyze new economic development ideas in the context of the community to determine if they would be successful is also an important step in improving economic development. When making decisions that might impact the region's economic development, NCC and the key stakeholders they work with calculate each circumstance carefully. These calculations fit within the definition of a learning region in terms of a community strategically planning how to improve individual economic opportunities and bolstering the entire community's economic outlook.

Additional Themes

Outside of three main characteristics of a learning region that were examined in this study, there are some characteristics that are not overtly stated but are perhaps inherently understood as being essential to the development of a learning region. Leadership and creativity are two important themes that emerged throughout the data that connect with Longworth's

learning region framework. This section will review these themes and connect them to the development of a learning region for NCC and Great Lake City.

Quality leadership is one trait that is very important to the development of a community that is interconnected and works together to ensure lifelong learning and economic security for a region. Throughout the data, leadership continually came up as an important theme for NCC. Almost every participant that was interviewed noted that Dean Harding had played a critical role in the college's involvement in economic development and that her presence had improved the college's connection to the local community. Although NCC had a representative on the GLEC board for nearly three decades, it wasn't until Dean Harding came to NCC that the college's involvement became more proactive and that NCC was willing to take the lead on some major projects, the Fab Lab as one example. President Wilder noted that it was because of Dean Harding that the Midwest branch campus grew from being just a few classes offered at the local library to the college having a physical building and working towards offering a full associate's degree. President Wilder said:

I would have to credit [Dean Harding] with what the new Great Lakes Center. We have been there for eons, and probably would still be chugging along at the same rate. But there were some—a new business opportunity and this Great Lakes Center, and there was good conversation, good synergy, right place, right time.

Mr. Rider was the one to bring the idea for the Fab Lab to the GLEC and presented the idea to a broad group; however, it was Dean Harding who initiated NCC's role in the Fab Lab and was an early supporter of the idea. He stated:

[The NCC] took a leadership role very early on 'cause in our first organizational meetings I presented the idea and showed what this thing was and what we felt it could

do and what we felt there was support for. And one of the first questions was but who's going to own it? Who's going to operate it—and besides, how it was going to be paid for? Besides how it was going to be paid for, who's going to own it, and operate it, and pay the insurance, and take ownership of it? And [NCC] spoke up very early on. 'Cause there was concern—who should this entity be? What's the appropriate one? And I think they are absolutely the appropriate and best. It could've been a business. It could have been [GLEC]. It could have been any another college. But I think this is part of the development of [NCC's] role in economic development. I think this is going to further that for them.

Leadership was also demonstrated at Midwest City's branch campus. Mr. Spalding's leadership in that community was one of the main reasons that NCC was able to expand their offerings, secure a new building, and navigate the local politics to get everything in place for their new campus. Mr. Rider noted that Mr. Spalding was a one-of-a-kind community member and that not every community was lucky enough to have someone like him.

The second theme that emerged from the data is the idea that a rural community must be creative. Several participants commented on how important it was for rural communities to be creative when creating partnerships and when working to improve economic development opportunities. Given that the community lacked a significant population and has very limited financial resources, participants felt that it took creativity to successfully work through issues or problems that arose. Additionally, Dr. Green discussed the need to think creatively for the college to be able to offer more programs on a restricted budget. Around the time of this study, NCC had developed a partnership with another community college to expand their surgical technician program. This partnership allowed students from both colleges to enroll in the

program, which brought in more students for the college and more tuition revenue. Dr. Green stated:

Being in a rural area has forced the community to be more creative in bringing economic development opportunities. [Surgical] tech partnership with [another community college] is key, but is challenging when others are too protective of their "turf"...you don't want to give away any competitive advantage, but the key is to not compete but be collaborative so both programs can thrive. This is the way of the future for rural community colleges - consortiums will be key.

This quote from Dr. Green also highlights an important idea that came up throughout data collection that in a rural area people must be willing to work together in many different ways in order for their communities to be successful. Mr. Rider recognized this on a daily basis with how differently the communities operated and noted those that wanted to do things on their own were not as successful as the communities that were willing to create partnerships. For NCC, interconnectedness was the key to creating strong relationships with the local community. Furthermore, connecting to other colleges, businesses, and organizations was crucial to the promotion of lifelong learning and economic development for the region. Those two things could not be accomplished without a significant amount of collaboration, as there just wasn't enough resources in the area for NCC to be able to support various lifelong learning and economic development projects on their own.

Creativity is an important concept in the learning region framework, and one of the definitions of a learning region states, "a learning city, town or region...mobilises all its human, physical and financial resources creatively and sensitively to develop the full potential of all its citizens" (Longworth, 2006, pg.23). Given NCC's limited resources, it is clear that being

creative is an essential part of their everyday working lives. Being in a rural area presents many challenges not faced by urban or suburban community colleges, and NCC's creativity must be on point to stay competitive with other regions. The Fab Lab is one example of thinking creatively to overcome roadblocks to providing training to industries, especially when the region was the size of Delaware and commuting to NCC's campus was not possible for many employers or citizens.

Conclusion

This study has found that NCC is connected to several key stakeholders in the community. However, the intensity of those connections varies depending on the particular stakeholder they are working with and whether or not they have a specific project to work on with that stakeholder. The commitment from NCC's key stakeholders to improve the community independently or through their relationship with NCC was not observed in this study. NCC seems to be putting effort into improving their relationships with their key stakeholders, however, that same commitment is not always reciprocated. Industries in particular seem to want NCC's assistance in developing new trainings for their employees, but they are not willing to take the time to assist in the planning or provide resources or on-the-clock hours for the training. Only when federal funds are available do industries want to commit to providing new training for their employees. Government agencies also are not engaged with NCC in a mutually beneficial relationship, but they will assist NCC if the college seeks them out. K-12 schools are another stakeholder group that was not observed as putting in any effort to connect with NCC. While NCC does offer dual enrollment courses for high school students, the relationship does not seem to extend any further. Based on interviews with ISD representatives, it also seems as though NCC has been the one to initiate new dual enrollment offerings, and the K-12 schools do

not reach out to NCC when wanting to develop new programs, and this was confirmed by the fact that the school chose to form a relationship with the four-year institution in an overlapping industry as the Fab Lab. Community organizations and the GLEC were the main stakeholders that not only accepted NCC's assistance on programs but would also aid the college whenever possible. NCC's relationship with the GLEC was the best example of a partnership in which both entities were working together to achieve common goals.

NCC was working to improve lifelong learning and economic development for the region through creative programming and their partnership with the GLEC. While business owners were not aware of all the ways NCC tried to connect with the community, the effort from the college was present. NCC did not seem to be focused on making sure the community was aware of their efforts; rather they spent their time thinking of new ways that the college could improve the community. NCC relied primarily on the GLEC to assist in economic development projects and utilized them as a resource because the college had limited personnel available to work on projects not directly related to their position. Rather than NCC being the main hub for economic development, as was indicated by the anticipated model of a learning region, there is no one stakeholder bringing all the stakeholders together to contribute to the economic development of the region.

Chapter 6: Discussion and Implications

The findings of this study answer the two main research questions:

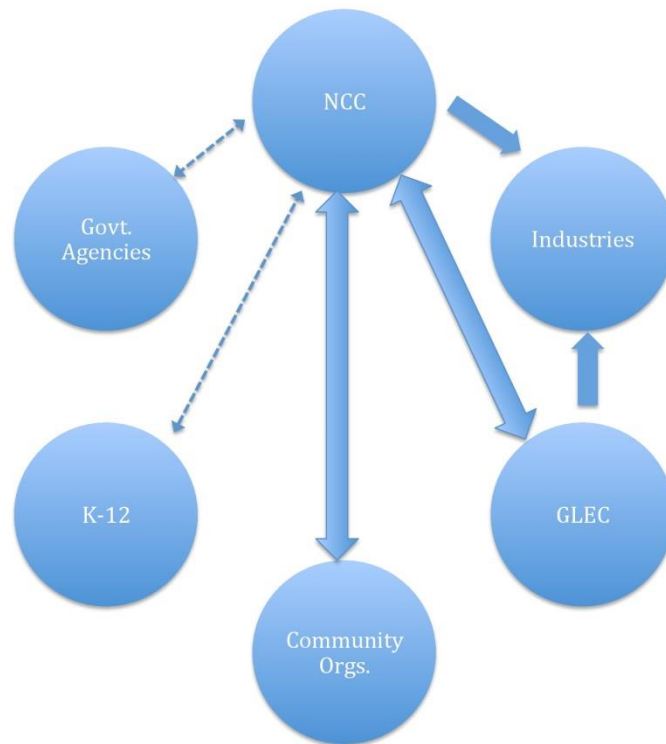
1. What are the links between a rural community college and the local community?
2. To what extent are aspects of a learning region (i.e. linkages between key stakeholders, a belief in lifelong learning, investment in individuals and community, and a focus on economic development) present in the relationship between a rural community college and the community?

This chapter will: (a) review the findings, (b) discuss the significance of the findings, (c) provide implications for future research, and (d) present implications for practice.

Review of Findings

The proposed model for this study suggested that NCC would be the central stakeholder in the community and that it would work to bridge together key stakeholders. However, this study found that NCC did not play a central role in bringing together stakeholders; rather the college was one of many stakeholders in the community working to help improve the region. Although this study did not examine the other stakeholders in-depth, the information gathered does suggest that the community lacks a central agency that brings together all the key stakeholders in the region to work towards common goals. Figure 6 highlights NCC's relationship with each of the identified key stakeholders as was observed during data collection. Dashed lines indicate that NCC does not work on a regular basis with these stakeholders. NCC's relationship with local industry was found to be strongest when they worked with GLEC, which is also shown through arrows connecting GLEC to area industries.

Figure 6: NCC's Community Stakeholder Relationships



In terms of interconnectedness, Figure 6 shows that NCC has several areas in which they could improve their relationship with key stakeholders. Perhaps most important is their relationship with the K-12 schools in order to help transition students into higher education upon graduating from high school. This is a critical step for the college to assist the community in becoming a learning region and instilling a cultural of lifelong learning into the community. Additionally, business owners were not found to be a key stakeholder for NCC, but they could be a strong partner. For example, they could be a source of internships and apprenticeships for their students, and they could assist the college with developing appropriate curriculum that will prepare students for local jobs in the 21st century.

NCC's strongest relationship was found to be with GLEC. It was evident that Dean Harding had made the strategic decision to improve NCC's relationship with GLEC and use them as a resource in connecting with local industry. Dean Harding's leadership was noted by many participants as the main reason that NCC's relationships with their stakeholders had strengthened over the past three years, and these strengthened relationships contributed greatly to the development of the area as a learning region.

However, for NCC and the surrounding region to move further towards becoming a learning region, leaders will be necessary to help adjust the community's mindset about the role that higher education can and should have in a community. Longworth (2009) discusses leadership mostly in terms of a learning region ensuring that leadership development happens throughout the community. He doesn't go into detail of the type of leadership necessary to develop or sustain a learning region. Before NCC can begin thinking about how to help develop leaders in the community, they should first do an analysis of the type of leader they want to be and provide for the region and how they can help lead the collected communities towards becoming a learning region.

Figure 7 shows a proposed model for a learning region based on the findings of this study. Unlike Longworth's model, the new model suggests that there is not a central agency or organization that is connecting all the community stakeholders. Rather, there are many stakeholders in a community that need to work together in order to create a region that embraces characteristics such as lifelong learning, interconnectedness, and working towards economic development.

Figure 7: Proposed Learning Region Model



The last key finding is the importance of being creative and innovative. Several NCC participants discussed that because the college was located in a rural area with limited resources, creativity is critical to staying competitive and to providing new opportunities for students and local residents. Dr. Green described a new partnership that NCC was in the process of developing with another community college located within the region. This other community college was located in a larger city and had over twice the student population of NCC. By partnering with this larger community college, NCC would be able to offer students a new academic program that they otherwise would not be able to run because they wouldn't have enough students or a faculty member to teach the course. Through the arrangement, NCC students could attend the partnering college without paying additional fees and receive the desired training. This partnership was in the beginning stages during the time of data collection, but could provide potential for even more academic offerings for NCC students.

The mobile Fab Lab is another example of a creative solution to a problem experienced by rural community colleges that service a large remote region. Once complete, the mobile lab will be able to reach a larger pool of individuals than if it were simply a stationary lab on NCC's campus. Although NCC participants stated that the training the Fab Lab will provide should have been offered long before the time of data collection, they hope the lab will help them stay competitive and ahead of the changing needs of the community and local industries. Creativity and innovation are also core concepts of Florida's (2002) take on human capital. Although creativity isn't explicitly mentioned in Longworth's learning region framework, one of the core principles of a learning region is the continual adjustment and improvement of a community. Being able to adjust to the changing needs of a community and to stay competitive with the knowledge economy will require being innovative.

Discussion

The findings of this study serve as supporting evidence for previous research and offer new insights into the challenges a rural community college faces in developing characteristics consistent with a learning region. Limited resources and unique characteristics of rural communities, such as long distances between the college campus and other community stakeholders, were the most commonly discussed barriers in this study.

Nearly all respondents who were interviewed for this study noted that limited resources were the biggest obstacle to overcome in order for the college to be able to work with more stakeholders in the community and to develop stronger relationships with their stakeholders. Dean Harding noted that she was unable to be in her office at all on days where she travelled to branch campuses due to the travel time between campus locations. This limits her productivity on the days she must travel because there is more time spent traveling than being present on the

campus. Travel time is also a consideration when meeting with NCC's stakeholders, as the stakeholders are also spread throughout the region and not as easily accessible as they would likely be in an urban or suburban area. Using technology to provide an easier way of meeting is a possibility, however, many rural areas still have limited internet access and not all stakeholders may be able to connect remotely. This finding supports the current literature that also notes the unique challenges rural communities face. The RCCI study found that lack of personnel and limited funding was a major obstacle for rural community colleges when partnering with other organizations (Salant & Kane, 2007).

The method by which partnerships are formed and sustained between NCC and their key stakeholders is an important contribution to the literature on partnerships in higher education. Although the literature suggests partnerships are being formed as a way to pool resources or address a key social issue (Eberts & Erckcek, 2001), this study found that the reason NCC forms partnerships is because of a specific project they would like assistance with from the community. In their partnerships, NCC still served as the main source of funding and provided the personnel driving the partnership forward. For NCC, partnerships were demonstrated to be more about generating ideas and bringing people to the table to contribute to planning. For example, NCC's partnerships with many community organizations were found to be focused mostly on information sharing, rather than a true partnership, where both entities work together to achieve certain goals. NCC was also the main driver of the Fab Lab project and has taken complete responsibility for the lab both financially but also in all aspects of planning.

There was a common undertone in many interviews that suggested that partnerships for NCC do not necessarily mean organizations will be pooling their resources. In fact, the opposite seemed true, specifically in terms of NCC's relationship with the local K-12 schools. What

could be a strong partnership seems to be strained because each entity is trying to hold onto their resources and suggest they alone have the answers. For instance, the local ISD was developing many curriculum offerings in the technical field without seeking NCC's assistance. NCC has also been moving forward on the Fab Lab without having a strong presence from the ISD on the Fab Lab committee. Additionally, NCC became the sole funder for the Fab Lab, even though it was developed primarily to help manufacturing companies in the area. This study did not observe the local manufacturers providing resources to NCC during the development of the Fab Lab. While there were manufacturers on the committee, their participation appeared to be minimal and all were non responsive to requests to participate in this study.

The use of creativity to solve problems is also an important finding to this study. Creativity connects well with Florida's (2002) updated perspective on human capital theory, which notes the importance of communities developing creative individuals to be able to compete in the knowledge economy. Florida's (2002) concept of creating a creative class of individuals that can be innovative in the new knowledge economy also connects well with the findings of this study. For Dr. Green, being creative was viewed as being critical to solving NCC's struggles with their ability to offer innovative programs while being cost effective for the college. Through creative partnerships and developing the Fab Lab, NCC hoped that the college could move forward and catch up with their counterparts in terms of offering innovative training that is needed in order for businesses and industries to grow in the region.

Being creative is also an important strategy for NCC to stay competitive and offer programs that will assist local residents in finding new employment opportunities. The Fab Lab was one creative way to connect local industries with the training they need while also offering high school students an opportunity to learn about the technologies required for manufacturing.

The Fab Lab addresses a key issue in many rural communities with great distances between the college, local industries, and local high schools. Students who lacked transportation and who could not enroll in traditional dual enrollment classes held on campus would now be able to gain college credit without leaving their high school parking lot. As noted previously, rural workers tend to travel longer distances to get to work. The Fab Lab also addresses this issue by bringing the training to the manufacturer, cutting down travel for employees as the college is located at a significant distance to some employers in the region.

This study utilizes human capital as a guiding concept, maintaining the following idea: if a community invests in their citizens' development, there will be long-term economic gain. In terms of embracing the concept of human capital, NCC has a long road ahead of them. In order for NCC and the region to invest in their citizens and make human capital a priority, they must first shift the community mentality that currently does not view higher education as an important resource. The concept of human capital espouses that if a community invests in its residents through advanced education, eventually that investment will pay off and bring economic growth to the community. If citizens are not willing to advance their own education, whether it is through formal trainings or informal cultural enrichment events, then no amount of investing in human capital will yield long-term results of economic growth for the community. NCC is not and should not be alone in its investment in the citizens. All of NCC's stakeholders could play a role by assisting with the development of new events and activities that would extend the community's current educational and cultural events.

Additionally, McMahon (2009) offers an extended take on human capital to include investment in the individual through non-market activities. McMahon notes that improving community health and encouraging community members to help each other through civic

involvement will promote greater social outcomes. Utilizing McMahon's take on human capital may serve as a better starting point for NCC and Great Lake City in that they are already doing many activities to benefit the community's social well-being. NCC's large recreation facility, nature trails, and sculpture art exhibit are all examples of non-market activities being used to promote better health and social well-being in the community. Where NCC seems to fall short is not in their community offerings, but in reaching the community and marketing their many programs. Business owners continually noted their lack of knowledge of NCC's offerings, which seems to be a direct result of the fact that NCC had demonstrated minimal marketing of their programs.

In summary, the findings of this study support current literature on the role of community colleges in promoting lifelong learning and economic development for their local regions. NCC has made contributions to the local community through their academic offerings and by supporting economic development projects. Although their contributions were not necessarily widely known by community members, they were actively engaged in working to assist the community in developing into an educated workforce. Additionally, the findings align with the findings of the RCCI and the challenges that rural community colleges face in developing and sustaining effective cross-sector partnerships.

Implications for Research

This study only begins to explore what characteristics of a learning region are present in the relationship between one rural community college and the surrounding community. There are a variety of directions that future research could expand this study. This section will review some ways that research on rural community colleges could continue.

Further studies should be done in comparable community colleges to see if the findings of this study are consistent among other rural community colleges. Ideally, further study within the same state would be beneficial, as the state's economy seems to play a major factor in what types of trainings and other programming the college creates. In this study, the state's economy not only impacted how much training NCC could provide, but it also impacted the type of training available. Given that NCC is located in a Midwest state that suffered significant decline in manufacturing since the economic recession of 2008, there have been relatively few academic programs geared towards manufacturing within the state until the development of the Fab Lab. A study done in a state with a high amount of manufacturing programs may not have the same challenges that NCC faced with their citizens being hesitant to support manufacturing out of fear that manufacturers would once again leave the region should the state experience another economic decline.

Context is critical when discussing rural community colleges, and identifying colleges that are not only similar in size but that also have a similarly sized local community is important. NCC services a very large geographical region in terms of square miles and comparing them to another rural community college that only services a small region may not yield a good comparison of data. NCC's branch campuses extend their region significantly and offer different challenges than a college with only one location, especially in terms of their connection to community stakeholders. The large region seems to make it particularly difficult for NCC to define their community and reach all of the key stakeholders within their local community and branch campus communities. A community college with a smaller geographical region may not have as many challenges with being interconnected to their key stakeholders. Future studies

should be cautious in defining a college's region when comparing rural colleges, as there can be vastly different regional contexts among rural areas.

Further research examining the Carnegie Classifications of rural community colleges would also be beneficial in order to learn more about the varying characteristics of these colleges. There is virtually no research comparing colleges within these new classifications, which leaves a significant gap in understanding rural community college's commonalities and differences. Once there is a greater understanding of rural community colleges, we can then begin comparing them to their urban and suburban counterparts.

Lastly, the concept of a learning region is not widely known, and has primarily been a concept adopted and explored in several European cities. In order to monitor the success of a city's adoption of learning region characteristics, there have been several assessments designed to measure the learning cities. The European Commission's *Towards a European Learning Society* (TELS) program developed an extensive audit for cities to utilize in order to test their progress towards becoming a learning region or learning city (Longworth, 2006). The audit evaluates the city based on a number of different categories including: commitment to a learning city, partnerships and resources, leadership development, wealth creation, and technology. Adapting this audit for American cities and regions would be another avenue for future research in order to better evaluate which characteristics a city or region has adopted well and which characteristics could be improved upon. The audit could also be a good tool to have the participants of the study fill out as a way to assess their own community. The TELS audit was designed for European cities and is not necessarily applicable to the rural community college environment in the United States. Before future research can utilize this audit, more research

examining where communities fall in terms of adopting learning region concepts will be an important step and served as the basis for this study.

Implications for Practice

The findings of this study have three main implications for practice. First, NCC's work towards economic development for the community needs to align with other community efforts. Second, NCC should consider adjusting their terminology and language to be more supportive of lifelong learning. Third, NCC should focus on sustaining relationships with key stakeholders even when a big project is not underway. This section will review these main implications for practice and offer recommendations for NCC. These three adjustments to NCC's current practices have been selected because they are perceived as the main ways NCC can work to overcome some of the challenges identified in this study and work towards the development of a learning region.

NCC's current system of cost-benefit analysis, completed when deciding whether or not to add a new program or cancel an existing program, is too narrowly focused on the costs and benefits that NCC would assume with any changes. While stakeholders outside the college may be consulted when the college is doing a cost-benefit analysis, the analysis has been performed with only the college's goals in mind. If NCC's goals were better aligned with the community stakeholders, there might more interconnectedness among stakeholders in the community. While this may be difficult to enact, as the college has limited financial freedom when it comes to creating programs that will not bring in revenue, there is potential for creating non-academic offerings for the community that might help ease some tensions and possibly build stronger partnerships. This could be another example of NCC's ability to be creative to keep or create programs that the community needs without having to take on all of the financial burden.

Community stakeholders need to also be proactive in helping NCC think creatively in order to offer programs that they desire. For example, the local casino that wants a hospitality program should be more involved in figuring out the financial logistics with NCC. Perhaps if the casino partnered with NCC, the program could exist and be beneficial to the students, the college, and the community.

The second recommendation for NCC's future development into a learning region is adjusting their terminology. The term *lifelong learning* was not mentioned by study participants. However, NCC does provide many programs that would be considered lifelong learning. In order to help shift the community mentality towards being more positive about the role that higher education can have in the region, using appropriate terms would be beneficial. The community must understand what lifelong learning is and what the value is before they can identify who is providing lifelong learning in their region. In order to develop an understanding of lifelong learning, NCC should continue to develop educational opportunities beyond the traditional classroom setting. Also, providing education for all types of student regardless of age will assist in developing a culture of lifelong learning. Specifically, if parents of young student can get involved in the college in some way they may be more likely to promote higher education to their student.

Lastly, NCC's ability to sustain relationships with their key stakeholders plays a critical role in how well connected they are to the community. The Fab Lab seems to have brought a variety of stakeholders together that had not previously been working together. NCC's willingness to take a leadership role in the Fab Lab has been well received by the community and community organizations. Utilizing the momentum of the Fab Lab to continue working with these organizations would greatly improve the interconnectedness between NCC and their key

stakeholders. Specifically, the Fab Lab has the potential to improve the relationship between NCC and the local K-12 schools with the addition of the Fab Lab to NCC's existing dual enrollment offerings.

Conclusion

This study has identified NCC's key stakeholders as community organizations, K-12 schools, local industries, the Great Lakes Economic Coalition, and government agencies. NCC's interconnectedness to these stakeholders varies significantly among them and also varies over time. NCC's relationship with each stakeholder is strongest when they have a specific project to work on together. Finding a way to sustain these relationships regardless of having a specific project-based focus will be critical to improving NCC's interconnectedness with the community.

There were very few indications that NCC and the surrounding community demonstrated characteristics consistent with a learning region. NCC struggled to overcome limited resources and a community mentality that didn't value higher education. If NCC has a desire to improve the community mentality, they must begin to utilize terminology consistent with lifelong learning and begin discussing the role that education could have in improving the community's health, social wellbeing, and economic opportunities. Investing in the community can only truly be effective if the community is willing to embrace new ideas about how education, both formal and informal, can improve their lives.

One of the core principles of a learning region is that the community has shared goals (Longworth, 2006). Currently there are no shared goals among NCC's key stakeholders. Each organization is working independently, even if they could benefit from collaborating with each other. A community-wide meeting to establish community goals and agree on how to best achieve those goals would greatly help NCC create stronger partnerships and also provide an

opportunity for new stakeholders in the community to reach out to NCC. Creating strong partnerships requires effort from both entities and cannot be solely the responsibility of NCC. While NCC may need to take the lead in making stronger connections, the responsibility of achieving community goals should be a shared responsibility of all community members and organizations. Once the community has identified goals, they can begin working as one to improve their interconnectedness and begin the development of a true learning region.

APPENDICES

Appendix A

Description of Observations

Meeting #1: Midwest City Economic Development Group monthly meeting. Meeting attendees were Ms. Anderson and Dean Harding from NCC with the entire board of the Economic Development Group. Ms. Anderson and Dean Harding attended the meeting to present information on the mobile Fab Lab. A video was shown to introduce the idea, and Dean Harding presented information on how the project was going to be funded, marketed, and other logistics that were being finalized. The board members reactions were very positive and noted that the Fab Lab was a shift from what NCC has offered in the past and a shift in how the region looks at manufacturing. Dean Harding noted the goal of the meeting was to get support for the project and to possibly find someone from the private sector in the region to be on the Fab Lab board.

Meeting #2: Meeting with the City Manager of Midwest City. Meeting attendees were Ms. Anderson, Dean Harding, Mr. Spalding, and the City Manager. The meeting was to introduce Ms. Anderson and Dean Harding to the City Manager, as well as discuss an issue with insufficient lighting in the parking lot by NCC's new building. Mr. Spalding suggested that the Economic Development Group could pay for the lot to be paved if the city would be willing to fund new lights. The City manager was hesitant to offer support due to strict budgets. The City manager did note that he would like to see NCC offer a full 2-year curriculum rather than just some of the general education courses they currently offer.

Meeting #3: Midwest City Rotary Club Meeting. Dean Harding, Mr. Rider, and Ms. Anderson attended the Midwest city Rotary Club meeting to present information about the mobile Fab Lab. They shared a promotional video with the group and discussed the progress that has been made on the lab. About 25 people were in attendance at the meeting with several guests that were non-Rotary club members.

Meeting #4: Fab Lab Advisory Board Meeting. In attendance was Dean Harding, Dr. Green, Professor Geller, and Mr. Edwards. Several industrial leaders were expected to be at the meeting, but did not show up. The meeting consisted of Dean Harding and Mr. Rider giving updates on the Fab Lab's progress. At the time of the meeting the physical lab had been ordered and Dean Harding noted it may take several months to build the lab. Mr. Rider discussed needing to begin connecting with local High Schools to talk about offering the lab as a dual enrollment opportunity. Professor Geller had just been hired prior to this meeting, so this was the first meeting he attended with the group. Dean Harding also presented a grant opportunity that she wanted to apply for to help cover future costs.

Appendix B

Random Sample Interview Questions

1. Have you ever worked with or partnered with NCMC? If so, in what way?
2. How would you describe the college's role in the community?
3. What types of services does NCMC provide for the community?
4. What businesses or organizations would you identify as being the major economic drivers for the community?
5. What role have you observed the college play in economic development for the region?
6. In what ways do you see NCMC playing a role in economic development in the future for the region?

Appendix C

Preliminary Interview Questions

1. Can you describe your role at the community college
2. What are your main responsibilities at the college?
3. How long have you been working at XX?
4. Given your responsibilities, What role do you play in the partnership with XX?
 - a. Has your responsibilities evolved over time?
 - b. What do you believe is the main goal of the partnership?
5. What role does XX community college play in the partnership? What types of activities is XX in charge of for the partnership?
6. Who are the key individuals in the college that are mostly involved in the partnership?
7. What are the goals of the partnership? How were these goals created and who was a part of the process of creating the goals?
8. How does XX view their role in the economic development partnership?
9. What types of programming or resources does the partnership provide for the community?
10. Who benefits from the partnership? What are the key benefits for an individual? For the community?
11. What has been the response from the community in regards to the work that the partnership has done?
 - a. have there been any complaints or issues that you've had to address?
 - b. What would you say is the biggest success of the partnership to date?

Appendix D

Final Interview Questions

1. Can you describe your role at the community college? What are your main responsibilities at the college?
2. How long have you been working at XX?
3. Given your responsibilities, what role do you play in the partnership with XX? Probe: Have your responsibilities with the partnership evolved over time?
4. What role does XX community college play in the partnership? What types of activities is XX in charge of for the partnership? Probe: how would you describe XX's participation in partnership activities/programs?
5. Who are the key individuals in the college that are mostly involved in the partnership? Probe: are these individuals involved in the partnership because they are part of their job responsibilities?
6. What are the goals of the partnership?
7. How were these goals created?
8. Who was a part of the process of creating the goals? Probe: did the community have a say in the goals?
9. What type of measurement or assessment is used to see if the goals are being achieved? Probe: is there a strategic plan in place that guides the operations of the partnership?
10. How does XX view their role in the economic development partnership? Probe: Does your personal view differ from the college?
11. What have been the biggest challenges to developing/sustaining the partnership?
12. What types of programming or resources does the partnership provide for the community?
13. Who benefits from the partnership? Probe: What are the key benefits for an individual? For the community?
14. What has been the response from the community in regards to the work that the partnership has done? Probe: have there been any complaints or issues that you've had to address?
15. What would you say is the biggest success of the partnership to date?
16. What you would describe as one the failures of the partnership? Probe: What happened after the failure? Where adjustments/changes made to the partnership?
17. Has the partnership's mission changed over time? Probe: If so, what caused the change?

Appendix E

Vignettes

Dean Harding

Dean Harding views the college's role in economic development to be very broad considering the large area in which the college services. Dean Harding identified NLEA as the major economic drive of the region, and NCMC is a key partner with NLEA. Additionally, North Central is a partner with the Chamber of Commerce (at several locations, not just locally), and serves on other important organizations such as the local college access network which brings together community leaders.

Although the college has partnerships that work towards enhancing academic offerings in the form of workforce development, there is a community-wide problem in that the region does not put higher education as a priority. With 53% of high school seniors not continuing on into higher education, even getting individuals to attend workforce development trainings can be a challenge.

Recent projects by the college have focused on developing a mobile fabrication lab that could provide workforce development and train high school students in CNC. At the heart of this project is a desire by North Central to connect with industry leaders and better learn what their needs are. Dean Harding also describes a main goal of the fabrication lab is to improve the perception behind manufacturing. Since the economic downturn in 2008, many people view manufacturing as a dying industry in the United States and something that is being done largely overseas. North Central hopes the Fab Lab will re-engage students and families in this industry and show them that there are viable careers in manufacturing.

Overall, Dean Harding notes that one of the main goals North Central has with its partnership with NLEA and the Fab Lab is to, "continue to find ways to bring industry, business, and education together."

Dr. Green

Oliver is also an administrator at NCC and has been in his current role for the past five years. Prior to taking on an administrative role he was a faculty member at several institutions and also has experience in the allied health field. Oliver works very closely with the local hospital and other industries to create programs that will train workers. For example, the hospital needed surgical technicians and asked the college to create a program. Given that this type of program would be extremely expensive and require the college to build an operating room Oliver told them it wasn't feasible. However, the hospital worked with Oliver to allow NCC students to use of their operating room at night so that students could get the training needed. This is just one example of many that Oliver shared of his role in working with industry leaders to create programs that will train workers to fulfill needed jobs in the area. Another important part of his job is making sure that NCC's curriculum is up-to-date with industry standards and that students are able to find jobs once they complete their certificate or degree.

Having worked at a large research university and now living in a rural area, Oliver noted that in Great Lake City higher education is not a priority for most residents. When asked about the role the college plays in economic development Oliver noted,

“I should say that the college should be providing a better pool from which employers can select to increase the strength and the longevity of their workforce. So, I’m aware that’s the standard answer. In practice, it’s a little different. Because the giant employers in this region, currently, are healthcare and hospitality. And there are all kinds of hospitality jobs that don’t require any kind of education at all.”

So while the college does play some role in economic development for the region, it is not directly contributing to at least one of the major industries, hospitality.

When asked what are some of the biggest challenges NCC faces when working with employers Oliver stated that being in such a rural area the college has very limited resources. NCC is a small college and does not have the funds to create all the various programs that employers would like. NCC has to do a cost-benefit analysis when considering a new program. If a program will not be able to provide students with job opportunities in the region than the program will likely not be created. Additionally, Oliver struggles to find qualified faculty member so teach in the area. Lack of resources and challenges of being in a rural area were common themes Oliver discussed in his interview.

Professor Geller

Professor Geller was recently hired by NCC to be the Director of the “Fab Lab.” He has been in the role less than 1 year, and has only been working in the “Fab Lab” for a few months as it was built during data collection for the study. Professor Geller came to the region to help take care of his grandfather and was working in a manufacturing plant before being hired by NCC. As the Director of the “Fab Lab,” Professor Geller works to connect with organizations and industries in the area to conduct training on computerized numeric control (CNC). In the short time that the “Fab Lab” has been open there have been over a thousand local citizens who have visited the lab either at an open house or groups that have asked to use the lab. One local Girl Scout troop took advantage of the lab shortly after it arrived at NCC and learned how to use the computer software to create name badges that would be made by the machines in the lab. Additionally, Professor Geller has worked with a few local manufacturers to set up trainings for their employees.

Professor Geller talked about the challenges of manufacturing in the area because there isn’t an educated workforce to fill the jobs. He commented that often times manufacturers won’t even bother to post a job opening because they know there isn’t a workforce and advertising job openings would be a waste of money and time for that company. Professor Geller talked very passionately about the role that manufacturing could have in the region given that by 2020 there will be a large workforce shortage in the field throughout the country.

At the time of the interview Professor Geller said that the community response has been very positive. He hopes the “Fab Lab” can be expanded into an on-campus lab as well so that a full associates degree could be offered rather than just a certificate. In the Fall, the “Fab Lab” will visit local high schools and offer dual enrollment credit to students.

Appendix F

Second Round Interview Questions

1. What type of career services are available for students?

Probe: Do you have internship placements? If so, how successful are they on average of getting students a job post graduation

2. Who are the biggest contributors to the local economy (not for Oliver)?

3. Using 5 nouns/adjectives how would you describe the local community/ What are the key characteristics that define the community?

4. What are the goals of the local community/local government for the region? are the goals of the community, local government, and NCC aligned? Do these stakeholders work together? Do they know each other's goals?

5. How would you define economic development?

6. How does the college assess which programs to pursue and which programs not to pursue? (for Example, hospitality, trucking, CNC?) Is there a set guidelines or is each program reviewed on its own merits?

7. (for Oliver only) You mentioned in your first interview that employers often seek out trainings that aren't viable. Has this ever created tension with employers?

8. What community boards do you sit on as part of your role at NCC? Are there any organizations are you a part of in the community?

Appendix G

IRB Approved Consent Form

A Case of a Rural Community College and Economic Development Research Project **Research Participant Information and Consent Form**

You are being asked to participate in a research study that seeks to better understand the role that community colleges play in economic development for their local community and region. You have been selected as a possible participant in this study due to your involvement either within the community college or community.

Your participation in this research is voluntary. You may elect not to participate without any penalty or loss of benefits at any time during the study. You are free to not answer certain questions without penalty or loss of benefits. The interview will take approximately one hour.

There are no foreseeable risks associated with participation in this study. Additionally, there are no costs or compensation for participating in this study.

Records identifying research participants (including interview transcripts) will be kept confidential. Your privacy will be protected to the maximum extent allowable by law. The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous. Pseudonyms will be assigned to each participant.

In order to better analyze the data collected the researchers will be audio taping all interviews. These recordings will only be used by the researcher.

Aleece Hodges is the study coordinator for this research project and is working under the supervision of Dr. Brendan Cantwell.

You must be at least 18 years of age or older to participate. Your participation is completely voluntary. You have the right to answer all of the questions that the researcher asks, or you may skip any that you find too uncomfortable without losing benefits. You may withdraw at any time from this research project.

If you have any questions about this study, please contact Aleece Hodges at alecehodes@gmail.com. You may also contact Dr. Brendan Cantwell, Assistant Professor in Educational Administration, 426 Erickson Hall, Michigan State University, by phone: (517)-355-1833, or email: brendanc@msu.edu.

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research

Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 207 Olds Hall, MSU, East Lansing, MI 48824.

By engaging in this interview you voluntarily agree to be in this research project. If you would like a copy of this consent form, one will be provided. Thank you for your participation!

Signature

Date

Appendix H

Contact Summary Sheet

Contact Type:

Visit _____

Phone _____

Date _____

Contact Represents:

NCC _____

GLEC _____

Community _____

Other _____

1. What were the main issues or themes that struck you in this contact?
2. Summarize the information you got (or failed to get) on each of the target questions
3. Other salient points made by this contact.
4. Are there follow-up questions you have for this contact? List each question

Appendix I

List and Definition of Codes

Table 4: Preliminary Codes

Code Title	Description
NCC Mission	Description of NCC's Mission as described by participants
Goals	Goals of economic development for the region
Assessing Goals	Assessment strategies
Challenges	Challenges to partnerships
NCC Key Partners	Key Stakeholders that work with NCC on economic development projects
GLEC	NCC's partnership with GLEC
K-12	Partnership with K-12, NCC's connection
Off-campus partners	Non-education related partners
Community Perspective	Perspective on NCC from community members
Off-campus perspectives	Perspective on NCC from non-NCC groups
Economic Development Projects	Projects that work to improve economic development
Community outreach	efforts to expand into the community
Academic Programs	academic offerings that support Workforce Development
Fab Lab	Mobile Fab Lab project
partnerships	partnerships between NCC and other entity not related to GLEC
Local Government	interactions with local government
rural influence	Rural influence on NCC, projects, etc...
Impact of Economic Downturn	How the economic recession has impacted NCC
leadership	The role that leadership plays in connecting college to stakeholders
Creating Community	Efforts to improve sense of community
community involvement	volunteers in the community who work towards improving the community in some way (economic development, etc...)
interconnected	The level of connection NCC has to its stakeholders
Links between stakeholders	How stakeholders work together
Lifelong Learning	Programs that promote lifelong learning
Investment in Individuals	How NCC invests in citizens
Future outlook	Future projects/goals moving forward
Role of Community College	Role NCC has in the community
Community Ed classes	Classes offered to community members

Appendix J

Pattern Codes

1. Interconnectedness
2. Lifelong Learning
3. Economic Development
4. Building Relationships
5. Rural Challenges

Appendix K

Interim Case Summary

During the initial round of data collection I was able to interview 14 individuals. Participants come from a variety of backgrounds and represent NCC, the local K-12 school District, local and state economic development agencies, and community members. While I had hoped to interview at least 15 individuals it was a challenge to find leaders within NCC and the community that didn't hold multiple positions. This challenge will be discussed more in the next section. Interviews lasted on average 45 minutes to one hour and were conducted at each participant's office. All participants were very open about their role in various projects and how they view NCC's role in economic development. The most interesting interviews came from the community members as they were able to offer a different perspective than those from NCC.

In addition to the interviews I have also been collecting interview data from a random sample of community members. This random sample consists of short interviews with local business owners and community members. I have just 5 questions that I ask each of them to get a feel for their knowledge of NCC and view of NCC's role in economic development. The random sample will be beneficial in comparing the NCC participant's responses. At this time only 5 participants in the random sample have been interviewed. Although I have contacted over 40 businesses, I have not received very many responses from my initial email invitation. My next strategy is to physically go into businesses and ask my questions in person. Hopefully this will yield a higher participation rate and get me to my goal of 25 respondents.

Observations of key meetings with NCC and some of the community organizations they work with is the third set of data. During these meetings I was able to observe NCC present on an upcoming project that would greatly impact the local manufacturing industry and hopefully

impact economic development by creating more jobs for the region. NCC has developed a mobile manufacturing lab. The Fabrication Lab, which is referred to as the "Fab Lab," was created to offer training to local manufacturers, provide college level courses for K-12 students, and offer a new certification in Computer Numeric Controls for NCC students. Additionally, the college hopes the Fab Lab will help adjust the mentality that manufacturing is a thing of the past or all the jobs are overseas and promote the growth of manufacturing within the community.

The fourth source of data is a review of pertinent documents. Document review has been an ongoing process throughout data collection. During several interviews I was able to collect brochures from a couple different organizations that highlight economic development efforts. These brochures also showcase the partnerships that are taking place within the community. I have received additional documents from the Dean of NCC that provide additional information and data on the impact NCC is having on economic development in the area. My next step of document review will be to read through GLEC's annual reports and also look online for any meeting minutes for various organizations that NCC partners with.

Analysis

Analysis of the data has been an ongoing process. After each interview I filled out a contact information sheet that summarized the main points of the interview. Each interview was transcribed and then coded. Memos were written throughout the coding process to help gather major ideas/concepts. A second round of coding will take place in order to find patterns and connect the codes to the conceptual framework. Codes were created organically throughout the process. During the second round of coding I will use key terms from the learning region framework in order to see which characteristics of a learning region are discussed most

frequently. For example, these codes will include: interconnectedness, lifelong learning, and cultural education. Next, themes that are beginning to emerge from the data will be discussed.

Emerging Themes

- *Defining community* is a major challenge when the "community" is spread out throughout several counties. NCC has a presence not only in their immediate four-county region but also have 2 branch campuses beyond their immediate service area. This creates an interesting but challenging role for NCC to have a presence in all communities in which they reside. It is apparent that NCC's strongest presence is in the community closest to the campus, however, community members in one of the branch campuses speak more passionately about NCC than those that reside in the immediate district. Additionally it seems more business owners know the NCC representative on a first name basis who services the branch campus. This could be in part because of the small communities in the branch campus, however, it also seems there is a lot of pressure/expectation on the Off-Campus NCC rep to have a presence in the community. This same pressure/expectation did not come out from other NCC reps. In fact, the language that is used by several NCC members suggests that they play a more passive role in connecting to the community and believe the community should come to them when in need of a training/service.

- *Leaders wear multiple hats.* With such a rural community it is common that the leaders at NCC (and community leaders) wear multiple hats. For example, the President of NCC is also the President of the Chamber of Commerce. While it seems this can be a benefit to the college by having someone connected to the Chamber it also limits the amount of people involved/connected to the college. If another community member had that role it could potentially mean another relationship between NCC and the community. This has also limited

my research study. It would have been beneficial to interview the President of the Chamber of Commerce, but when she also is the President of NCC the interview would be redundant. I encountered this situation in a couple of different examples, which made it more challenging to reach my goal of 15 interviews.

- *Funding*. Limited resources is a common theme throughout all the interviews. Determining what academic programs to fund is critical. For example, people have asked for many programs but if they will only train a handful of students it's not cost effective. Another example is hospitality. Although the area has a large tourism industry the businesses do not require or need their employees to be trained in hospitality. Unfortunately, a certificate in hospitality would not get a student more money or even guarantee a job over someone else. Deciding which programs to fund and which programs are not necessary can greatly impact the relationship between NCC and the community. While NCC has a strong relationship with the hospital and some manufacturers in the area it seems that the small business owners are not as well connected to the college.

NCC has been strategic about funding programs that will help balance the male/female ratio at the college. With a large nursing program the college often has more females, however, they've recently developed a truck driving program to hopefully recruit more men. The college often has to balance their relationship with local industries by providing services, but being realistic with what programs will generate money and provide students with the potential to gain employment. I believe this issue is a key determinant of the type of relationship NCC has with the community. If a business needs a specific training or believes that an academic program is needed, but NCC doesn't think it will generate enough profits there is potential for a strained

relationship. One of my random sample participants did note that he believes the college does not have enough computer information systems classes at the college.

- *Branch Campuses* – the branch campuses have many challenges. First, the campus must be integrated into the local community, but still follow the mission and vision of the college (which can be 50-60 miles away). At times the vision of the college does not align with the vision of the local community. One community member discussed the resistance from local city officials in working with the college to create the newest branch campus. It has taken community volunteers to open the door with city officials in getting the physical building for the campus. Another issue with this same campus is the language used to describe the campus. Currently the branch campus has a generic name to describe and education center. The community members would like to see NCC change the name from Great Lakes Education Center to actually incorporate NCC's name.

Secondly, branch campuses have very limited resources. The 2 branch campuses share 1 full-time staff member who serves as the Director of Off-Campus Activities for both campuses. Her role is all-encompassing and each day she serves as a community liaison for both branch campuses, a representative from the college, a secretary, an academic advisor, a financial aid counselor, and an admissions representative. Spending a couple days each week at each branch campus cuts her time to work towards building community relationships. Specifically, after interviewing her it was apparent that her role in the community was much stronger at one branch campus over the other. As a result the interaction with the second campus is very limited and the role in the community seems to be non-existent.

- *Development of Economic Development culture* - over the past few years NCC has been more involved in economic development activities. Many participants noted that this is due to

one leader in particular who has been willing to take on big projects (Fab Lab and opening a new branch campus as examples) and spend a significant amount of time in the community. NCC has become a core partner with GLEC and is beginning to play an active role in more projects with the partnership. Even though NCC has had a member on the board for 28 years, participants noted that in the last couple years their involvement has significantly increased. The director of Community Education at NCC also expressed a shift in economic development culture with a shift in how his department operates. Since the recession in 2008 the department is no longer solely providing education and training for major manufacturers, but is now providing the community with more educational opportunities. They are now reaching a greater percentage of the community and interacting with residents they normally wouldn't have. Although the department isn't bringing in a large cash flow as they once were, they are working towards community development in a way that wasn't being done in the past.

Another respondent stated, "Our community character is not manufacturing or industrial. And so a lot of the grant opportunities that are available for workforce development and training are not available, that my peers all apply for and receive (Interview #5)." This highlights another barrier in creating more economic development opportunities simply because businesses don't apply for grants that might help them receive additional training to improve their employees. This problem is also discussed by a GLEC member. GLEC works with businesses in many ways from creating a business plan, to working with local city government in dealing with red tape, to helping them find sources of funding for trainings.

Connecting data to research questions

Research Question #1: To what extent are aspects of a learning region (i.e. linkages between stakeholders, a belief in lifelong learning, investment in individuals, and focus on

economic development) present in a relationship between a rural community college and the community?

From the data I have gathered so far it appears that while there are some characteristics of a learning region present between NCC and the community there are many improvements that could be made. Links between stakeholders seem to be strongest when there is a project that requires collaboration between the college and another organization or business. The President of NCC discussed working with the City on opening up a second entrance to the campus, but didn't elaborate about their relationship with city officials unless there was a specific project they were working on. The Fab Lab is another example of a project that has brought different stakeholders together for the first time. The opening of the branch campus is also a major project that is forcing some relationships to be formed between NCC and the local community of the branch campus. The relationship between NCC and the branch campus is a long-standing relationship since the college has been offering classes in some capacity in the area since the 70's, but the relationship with the community needs to be improved (as was commented on by community members).

NCC is definitely focused on investing in individuals and creating academic programs that will get students the training they need to find a job. They are very careful not to create programs that won't positively impact the marketplace. Additionally, the college has updated their facilities and has a large gym area that is open to all community members, thus showing an interest in maintaining and improving community health. They also have many activities and shows that community members can attend throughout the year.

Based on the random sample that I have collected so far it seems that local residents/business owners are only aware of what NCC offers the community if they have had a

reason to be involved with the college. For example, those that know what types of programs NCC offers have either attended NCC themselves or have a family member that has/is currently attending classes at NCC. It doesn't seem that there is a vast knowledge in the community of what NCC has to offer the community, which could indicate that there is limited interaction between NCC and local business owners.

Research question #2: How do rural community college leaders view their role in economic development?

Most of the initial responses from the NCC participants first mention that their role in creating academic programs that will contribute to the economy is the most significant way the college contributes to economic development. Everyone mentioned almost exclusively how the college has educated a majority of the nurses at the local hospital. The nursing program seems to be one of the largest academic programs at NCC and has the most direct impact on the local economy. Another major player in the community is a Plastics manufacturer who has a long-standing partnership with NCC in training and development.

In my next phase of interviews I would like to dig deeper in discussing what economic development means for the college and how they would define economic development.

Remaining Questions

After an initial review of my data I have a few remaining questions that I would like to ask my core interview participants. Below is a list of questions that I will ask during my second round of interviews.

1. What type of career services are available for students?

Probe: Do you have internship placements? If so, how successful are they on average of getting students a job post graduation

2. Who are the biggest contributors to the local economy?
3. Using 5 adjectives how would you describe the local community/ What are the key characteristics that define the community?
4. What are the goals of the local community/local government for the region? are the goals of the community, local government, and NCC aligned? Do these stakeholders work together? Do they know each other's goals?
5. How would you define economic development?

BIBLIOGRAPHY

BIBLIOGRAPHY

- American Association of Community Colleges. (1993). *The workforce training imperative: Meeting the training needs of the nation*. A policy paper on the role of community colleges in providing workforce training. Washington, DC: AACC.
- Amey, M. (2007). *Collaborations across educational sectors*. New Directions for Community Colleges, No. 139. San Francisco: Jossey-Bass.
- Austin, J. (2012). Reanimating the vital center: Challenges and opportunities in the regional talent development pipeline. In *Advancing the Regional Role of Two-Year Colleges*. New Directions for Community Colleges, 157, 17-28.
- Becker, G.S. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5), 9-49.
<http://www.jstor.org/discover/10.2307/1829103?uid=3739728&uid=2&uid=4&uid=3739256&sid=21102556849141>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago, IL: University of Chicago Press.
- Boggs, G. (2009). Reacting to the American graduation initiative. *Community College Journal*, 80(2), 16-21.
- Bragg, D. Dresser, L. & Smith, W. (2012). Leveraging workforce development and postsecondary education for low-skilled, low-income workers: Lessons from the shifting gears initiative. In *New Directions for Community Colleges*, 157, 53- 66.
- Bringle, R. & Hatcher, J. (2002). Campus-community partnerships: The terms of engagement. *Journal of Social Issues*, 58(3), 503-516.
- Carnegie Foundation for the Advancement of Teaching and Learning, (2013). Classification Description. Retrieved from:
http://classifications.carnegiefoundation.org/descriptions/community_engagement.php
- Christopherson, S. & Clark, J. (2010). Limits to ‘the learning region’: What university-centered economic development can (and cannot) do to create knowledge-based regional economics. *Local Economy*, 25(2), 120-130. DOI: 10.1080/02690941003741127.
- Condition on Education, (2012). Institute of Education Sciences: National Center for Education Statistics. U.S. Department of Education, NCES 2012-045.
- Cox, D. (2000). Developing a framework for understanding university-community partnerships. *A Journal of Policy Development and Research*. 5(1), 9-26.

- Creswell, J. (2007). *Qualitative Inquiry and Research Design: Choosing among five approaches*. 2nd Edition. Sage Publications.
- De Meulemeester, J. & Rochat, D. (1995). A causality analysis of the link between higher education and economic development. *Economics of Education*, 14(4), 351-361.
- Dominguez, R. (2006). Partnership, preparation, and progress in training community college administrative leaders. *Educational Considerations*, 33(2), 30-34.
- Eberts, R. & Erckcek, G. (2001). The role of partnership in economic development and labor markets in the United States. In [Local Partnerships for Better Governance](#). Paris: OECD (Organisation for Economic Co-operation and Development), 2001, pp. 251-279
- Eller, R., Martinez, R., Pace, C., Pavel, M., Garza, H., Barnett, L. (1998). Rural community college initiative: II economic development. *American Association of Community Colleges*.
- Elliot, D., Levin, S., Meisel, J., (1988). Measuring the economic impact of institutions of higher education. *Research in Higher Education*, 28(1), 17-33.
- Eddy, P. (2010). *Partnerships and Collaboration in Higher Education*. ASHE Higher Education Report, 36(2).
- Eddy, P. & Murray, J. (2007). *Rural Community Colleges: Teaching, Learning, and Leading in the Heartland*. New Directions for Community Colleges, No. 137. Jossey-Bass: San Francisco.
- Emery, M. (2008). *From ripples to waves: The rural community college initiative to build new partnerships in support of America's rural communities*. Ames, IA: North Central Regional Center for Rural Development.
- Faraj, A. (1988). Higher education and economic development in South Asian countries. *Higher Education Review*, 21(1), 9-26.
- Florida, R. (1995). Toward the learning region. *Futures*, 27(5) 527-536.
- Florida, R. (2002). *The Rise of the Creative Class*. New York, NY: Basic Books.
- Florida, R., Mellander, C., & Stolarick, K. (2008). Inside the Black Box of Regional Development. *Journal of Economic Geography*, 8(5), 615-649.
- Gais, T. & Wright, D. (2012). The diversity of university economic development activities and issues of impact measurement. In Lane, J. & Johnstone, B. *Universities and colleges as economic drivers: measuring higher education's role in economic development*. Albany: State University of New York Press.

- Grayson, W. (2012). Community colleges play vital part in rural areas' economic development, professor says. Tuscaloosa News. www.tuscaloosanews.com/article.20120318/NEWS/120319742.
- Hardy, D. & Katsinas, S. (2007). Classifying community colleges: How rural community colleges fit. In *Rural Community Colleges: Teaching, Learning, and Leading in the Heartland*. New Directions for Community Colleges, 137, 5-17.
- Jacobs, J. (2012). The essential role of community colleges in rebuilding the nation's communities and economies. In Lane, J. & Johnstone, B. (2012). *Universities and colleges as economic drivers: measuring higher education's role in economic development*. Albany: State University of New York Press.
- Jenkins, D. (2009). How community colleges can reach Obama's goals. *Inside Higher Education*
- Kahlenberg, R. (2012). Defining community college down. *The Chronicle of Higher Education*. <http://chronicle.com/blogs/innovations/defining-community-colleges-down/33253>
- Kanter, M. (2011). Meeting President Obama's 2020 College Completion Goal. A presentation given by Under Secretary Martha Kanter. <http://www.ed.gov/news/speeches/meeting-president-obamas-2020-college-completion-goal>
- Keane, J. & Allison, J. (1999). The intersection of the learning region and local and regional economic development: analyzing the role of higher education. *Regional Studies*, 33(9), 896-902.
- Kisker, C. & Carducci, R. (2003). UCLA community college review: Community college partnerships with the private sector – organizational contexts and models for successful collaboration. *Community College Review*, 31(3), 55-74.
- Krueger, A. & Lindahl, L. (2000). Education for growth: Why and for whom? National Bureau of Economic Research, working paper 7591. <http://www.nber.org/papers/w7591>
- Laanan, F., Hardy, D., & Katsinas, S. (2006). Documenting and assessing the role of community colleges in developing human capital. *Community College Journal of Research and Practice*, 30(10), 855-869.
- Lane, J. (2012). Higher education an economic competitiveness. In Lane, J. & Johnstone, B. (2012). *Universities and colleges as economic drivers: measuring higher education's role in economic development*. Albany: State University of New York Press.
- Lane, J. & Johnstone, B. (2012). *Universities and colleges as economic drivers: measuring higher education's role in economic development*. Albany: State University of New York Press.

- Leiderman, S., Furco, A., Zapf, J., & Goss, M. (2003). *Building partnerships with college campuses: Community perspectives*. The Council of Independent Colleges Consortium for the Advancement of Private Higher Education's Engaging Community and Campuses Grant Program.
- Levine, M. (2013). The skills gap and unemployment in Wisconsin: Separating fact from fiction. Center for Economic Development. University of Wisconsin-Milwaukee.
http://www4.uwm.edu/ced/publications/skillsgap_2013-2.pdf
- Linquist, K. (2005). Lifelong learning as a mechanism for change. In *Marking Knowledge Work, Conference Proceedings*. Scotland: University of Stirling.
- Lincoln, Y. & Guba, E. (1994). Competing paradigms in qualitative research. In N.K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage.
- Lisman, C.D. (2001). *The Community College Role in Welfare to Work*. New Directions for Community Colleges, 116. Jossey- Bass.
- Longworth, N. (2006). *Learning cities, learning regions, learning communities: Lifelong learning and local government*. Routledge: New York, NY.
- Marshall, C., & Rossman, G. B. (2006). *Designing Qualitative Research* (4 th ed.). Thousand Oaks, CA: Sage.
- Maxwell, J. (2013). *Qualitative Research Design: An Interactive Approach, Third Edition*. Thousand Oaks, CA: Sage.
- McMahon, W.W. (2009). *The Private & Social Benefits of Higher Education: Higher Learning, Greater Good*. Baltimore, MD: The Johns Hopkins University Press
- Merriam, S. B. (2002). *Introduction to Qualitative Research*. San Francisco: Jossey-Bass.
- Meyer, C. (2001). A case in case study methodology. *Field Methods*, 13(4), 329-352.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: Sage Publications.
- Miller, M. & Kissinger, D. (2007). Connecting rural community colleges to their communities. In *Rural Community Colleges: Teaching, Learning, and Leading in the Heartland*. New Directions for Community Colleges, 137, 27-34.
- Miller, M. & Tuttle, C. (2007). Building communities: How rural community colleges develop their communities and the people who live in them. *Community College Journal of Research and Practice*, 31: 117-127.

- Morgan, K. (1997). The learning region: Institutions, innovation, and regional renewal. , 31(5), 491-503.
- Moussouris, L. (1998). The higher education-economic development 'connection' in Massachusetts: forging a critical linkage? *Higher Education*, 35(1), 91-112.
- National Governors Association, (2013). Higher education's contribution to economic growth strategies. <http://www.nga.org/cms/home/nga-center-for-best-practices/center-issues/page-ehsw-issues/col2-content/main-content-list/higher-educations-contribution-t.html>
- Obama, B. (2009) Remarks by the President on the American graduation initiative. The White House: Office of the Press Secretary, <http://www.whitehouse.gov/issues/education/higher-education>
- Patton, M. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, 35(5 Pt 2).
- Patton, M. (2002). *Qualitative Research and Evaluation Methods*. Thousand Oaks: Sage.
- Phelps, L.A. (2012). Advancing the regional role of two- year colleges. *New Directions for Community Colleges*, 157.
- Powell and Snellman (2004). The Knowledge Economy, Annual Review of Sociology, August, Vol. 30, pp. 199-220
- Salant, P., & Kane, S. (2007). *An evaluation of the Southern Rural Community College Initiative (2002-2007)*. Mississippi State, MS: Mississippi State University, Southern Rural Development Center.
- Selsky, J. & Parker, B. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of Management*, 31(6), 849-873.
- Schneider, M. & Yin, L. (2011). The high cost of low graduation rates: How much does dropping out of college really cost? *American Institutes for Research*.
- Siegel, D. (2010). *Organizing for Social Partnerships: Higher Education in Cross-Sector Collaboration*. New York, NY: Routledge.
- Spellings, M. (2005). Education in the United States: A brief overview. U.S. Department of Education.
- Stake, R. (1995). *The Art of Case Study Research*. Thousand Oaks, California: Sage Publications, Inc.

- Stake, R. (2004). Qualitative case study. In N.K. Denzin & Y.S. Lincoln (eds.) *The Sage Handbook of Qualitative Research*, 3rd Edition (pp. 443-466). Thousand Oaks, CA: Sage.
- Sweetland, S. (1996). Human capital theory: foundations of a field of inquiry. *Review of Educational Research*, 66(3), 341-359.
- Texas Education Agency, (2013). History of P-16 Council.
<http://www.tea.state.tx.us/index3.aspx?id=4767>
- Thelin, J. (2004). *A history of American higher education*. Baltimore: The Johns Hopkins University Press.
- Trani, E. & Holsworth, R. (2010). *The indispensable university: higher education, economic development, and the knowledge economy*. United Kingdom: American Council on Education.
- U.S. Census Bureau (2013). Census explorer. <http://www.census.gov/en.html>
- U.S. Department of Commerce, (2013). National income and product accounts. Bureau of Economic Analysis. <http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm>
- Mr. Powers, S. (2007). Building a learning region: Whose framework of lifelong learning matters? In D.N. Aspdin (ed), *Professor Geller's Philosophical Perspectives of Lifelong Learning*. Springer.
- Watson, J. (2007). Stepping outside the big box high school: A partnership influenced by goals, capital, and decision making. In M. Amey (ed), *Collaborations Across Educational Sectors*. New Directions for Community Colleges, 139, 49-56. Wiley Periodicals.
- Yin, R. (2009). *Case Study Research: design and methods* (4th ed.) Thousand Oaks, CA: SAGE.
- Zhao, L.M. & Reisman, A. (1992). Toward meta research on technology-transfer. *IEEE Transactions on Engineering Management*, 39(1), 13-21.