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The Role of Higher Education in Rural Community Development

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Abstract

Higher education institutions commonly play a role in community development. Rural communities may be even more dependent on the university's investment. As higher education has looked to meet demands of stakeholders calling for greater accountability, it has become necessary for universities to be able to justify the effectiveness of these efforts. The purpose of this study was to determine the elements necessary for successful rural community development in Western Oklahoma. Utilizing the Delphi research method, 20 community development experts in rural Western Oklahoma participated in the three-round survey process. In the initial survey, participants collectively submitted a list of 41 elements they believed to be necessary for successful rural community development. Participants were then asked to rate each element as to their level of agreement that the element was necessary. The experts were then given the mean, median and mode along with their previous individual rating for the 13 elements with the highest mean scores. Provided with this additional information, they were then asked to rate those elements once more. At the conclusion of the final survey, the experts had shown high levels of consensus on 12 of the 13 elements. Though one of the objectives of the study was to analyze how education ranked among the list of essential elements, higher education was not among the 41 original elements. No major differences were found between the scoring in Round 2 and Round 3 surveys. No significant differences were found between the scores given by experts based on what regional Council of Government (COG) they belonged to. Using Flora and Flora's Community Capitals Framework (2008), most of the top 13 items could be found in the built or human capital categories. The implications to policymakers are that rural communities need additional policy specific to those areas the experts agreed were essential, including elements of basic infrastructure and economic/workforce development. Focusing higher

education efforts on the elements identified in this study could help to better define the role of higher education in rural community development and assist in the planning and assessment of institutional community development investment.

Acknowledgements

I would like to take the opportunity to extend special thanks to many people who have played a role in my journey to complete this goal. First to my aunt, Dr. Nita L. Paden, whose hooding was my first glimpse into my academic future, I can appreciate your perseverance and your journey so much more today. I would like to thank those colleagues, mentors and friends who encouraged me to climb and were there to support me along the way: Dr. Larry B. & Pamela Williams, Steven J. Valencia, Dr. Phillip Bridgmon, Dr. Shannon Bridgmon, Erin Feller, Ameil Shadid, Dr. Neal Weaver, Dr. Kay Lallier Grant, Phyllis Wilmon, Scott Pursley, Dr. Robyn Pursley, Karl Miller, Brooks Hull, Roxann James, Allison Howard, Sarah Whittle, Stephanie Isaacs, Renita Dick, Dr. Barbara Abercrombie, Gary Gore, Dan Sisk, Jay Hannah, Don Moss, Dr. Holly Cullen, Dr. Harold & Mary Battenfield, Dr. Karen Carey and Dr. Laura Boren. Many special people have endured this process alongside me as fellow classmates. They have helped me "keep my eye on the tam" and are now forever dear to my heart including: Dr. Blake Decker, Dr. Danny Chand, Dr. Kristopher Copeland, Tammy Overaker and Dr. Elizabeth Underwood. During this process I have found my dissertation chair, Dr. Michael T. Miller, to be my greatest ally. Your influence, patience, and encouragement will never be forgotten. If only all Ph.D. candidates were as lucky as I was! I also had an exceptional committee with Dr. Valerie Hunt and Dr. Ketevan Mamiseishvili. Thank you all for your willingness to serve students in this capacity and thank you for all of the wisdom and support you have bestowed upon me.

I would like to say a special thank you to my family. I was blessed to be born in a family that taught me the value of community development and exemplified the role of a community servant. I was truly blessed with a grandmother, Juanita Paden, who served her community until her last breath. My parents, Guy and Suzanne Hylton, have been my role models, teaching me to

bloom where I am planted and to give back in ways to make my community and its citizens also flourish. All three of these have supported me, both financially and emotionally, through this process. You will never know how much joy I found in celebrating every little milestone with you. I know I also speak for my brother and sister when I say thank you for all of the lessons and experiences you afforded us that have shaped us all into the very successful individuals we are today. Speaking of my siblings I must also thank each of them for their inspiration in my life. You all have pursued your passions without hesitation and achieved amazing things. I appreciate the examples you have been to me. I would also like to thank my in-laws, Mack and Euletta Thompson, for all of the times they were willing to entertain my family while I worked. I appreciate your understanding.

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Dedication

I would like to dedicate my dissertation to my parents, Guy and Suzanne Hylton, who are the best thing that ever happened to two rural Oklahoma communities. You inspire me to make the world a better place, just as you have. I would also like to dedicate this to my husband, Kin. Throughout the rollercoaster, you have always been there to support me and you have the same passion to invest in the people that surround us. Though we do things very differently, we make a great team. I love you. And finally to my girls, Meg and McKinley, I challenge you to make good choices, find ways to make your mark on the world and leave things better than you found them.

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Chapter I

Introduction

Higher education, in many communities, has the stigma of being an ivory tower, functioning as its own community with a "high degree of autonomy" (Kettunen, 2004, p. 357). For much of their existence, the main focus of higher education institutions has been to educate and to provide an incubator for scholarly activity. Many critics view the role and responsibility of higher education in community development as simply producing a trained workforce for the surrounding area. While this is a critical role of the institution, there is room for a more extensive and collaborative relationship between the university and the community in which it resides. As Maryland Secretary of Housing and Community Development Raymond Skinner (2009) said in an address to the National Outreach Scholarship Conference, "We need you to come down from your ivory towers and bring your skills, talents, and resources into the community" (p. 4).

While viewed as an auxiliary function by many, community development is a function of higher education that continues to advance, both at rural and urban institutions. While urban communities may have additional resources to drive community development, higher education institutions are positioned to be the primary agent for change in a rural community.

Context of the Problem

Institutions of higher education perform a balancing act in an effort to meet the many needs of their varied stakeholders. Some stakeholders are looking for an education, others a job, some are looking for a return on investment of tax dollars, while others depend on the research provided by institutions. Add in declining state budgets and criticism for rising tuition and one can see how difficult the dance can be (Heller, 2001, Williams & Pettitt, 2003).

Traditionally, teaching and scholarship have been the focus of higher education (Thelin,

2004). However, service has now become an additional responsibility of the university (Cohen, 1998). Service takes shape in many forms including outreach programs, service-learning courses and community partnerships. For those institutions located in the 85% of America's geography deemed rural, the responsibility to be involved in the development efforts of the community is even more critical because of the significant influence they have on the activities and identity of their communities (Miller & Kissinger, 2007).

Green and Haines (2008) defined community development as involving "a planned effort to build assets that increase the capacity of residents to improve their quality of life" (p.7) and includes universities as an example of one of the essential elements for a community, as one of the "social organizations or institutions that provide regular interaction among residents," and "social interaction on matters concerning a common interest" (p.2). According to Fluharty and Scaggs (2007), "If rural colleges and rural communities share common density, then mutual engagement around strategies for building sustainable communities is essential" (p. 20).

Typically rural communities are more likely to have declining populations, depressed economies, higher poverty rates and lower percentages of college degree completion (Flora & Flora, 2008; Fluharty & Scaggs, 2007; Miller & Kissinger, 2007). Often because of their remote access to urban centers, rural communities are limited in their offerings of entertainment venues and cultural events. They also have less access to emerging technology.

While many rural areas are experiencing the exodus of their population, some areas of Western Oklahoma are currently faced with a different challenge. Due to a boom in oil and gas drilling, there has been a significant influx of workers attracted by the higher paying jobs of the industry. While an influx of workers brings tax dollars and revenue to the area, it also creates additional challenges. Many communities are faced with a housing shortage. With the draw of

the wage levels of oil and gas jobs, many of the area's businesses are having issues hiring minimum wage positions. Area schools are running out of space for the children of these additional families in the area. Nevertheless many who have been in the area for a long time know that a bust inevitably follows an oil boom and are concerned with investing in infrastructure for those who will not be here in a few years. Others see this as an opportunity to strengthen infrastructure while the extra tax dollars are coming in.

However, as previously mentioned, many rural communities may not have the resources or political capital to assess, let alone address challenges like these. Miller and Kissinger (2007) referred to the need of a "social engine" in rural communities to bring the community together and drive economic growth and development (p.27). Fluharty and Scaggs (2007) called for rural higher education institutions to be "catalysts for community and economic development" in locations where "meaningful public policies and adequate resources to achieve the simultaneous outcomes of building rural community development capacity and educating rural residents are woefully lacking" (p.19).

While service at a university is performed in a variety of ways, participating in community development efforts is one way universities have committed themselves to the communities they serve. As institutions of higher education work to make positive change for their communities and improve the quality of life, the need for policy change is often encountered. Rural communities, alone, do not always have the capacity or organization to be able to create change. There are many opportunities for institutions of higher education to lead or assist in efforts to influence policy outputs and to communicate policy outcomes in an effort to create necessary change.

Current needs in rural communities demand that the role of higher education be expanded

to lead and partner in these efforts to develop strategic and long-range plans for the area and also to establish the institution as a community resource for services such as continuing education, small business development, cultural activities and as a resource for library, technology and fitness facilities (Garza & Eller, 1998). Many times a college or university is the largest entity in town. There are not other large organizations for the community to depend on for resources, support and leadership. Universities are critical players in the communities they serve.

Meeting the expectations of students, parents, faculty, staff, regents, government officials, accrediting bodies as well as the communities each school serves, is a major balancing act for any institution of higher education. Government bodies are pushing for more focus on degree completion and the time it takes a student to complete a degree. However, accrediting bodies have recognized the important role institutions of higher education play in community involvement and development and in response have added it to the criteria they require for national accreditation. While retaining accreditation is critical to a thriving institution, it should be as important for the university to follow its own mission and to strive for continued improvement through regular assessment of the programs and activities they produce to assist in community development. A university producing ineffective community development programs benefits no one. Assessment followed by the utilization of the data to make improvements in the university's community development programs and activities is the key a true university-community partnership. As Skinner (2009) said, "Successful collaboration among universities, local government, and community advocates can have a real and positive impact on our quality of life if that collaboration results in action" (p.4). Miller and Kissinger (2007) wrote, " …colleges have a rare opportunity to help solve the problems that continue to challenge many rural areas and that their leaders can help sustain rural America in the twenty-first century"

(p.33-34).

In order to determine the effectiveness of university community development programs, administrators must have an idea of what the essential elements of an effective program entail. With little research detailing the elements essential for effective rural community development, this study will seek to add to the body of knowledge and better outline those elements.

Statement of the Purpose

The purpose for conducting the study was to determine the essential elements of effective community development in rural Western Oklahoma and to identify what role higher education institutions play or could play regarding these essential elements. The study was completed using an exploratory survey research method with experts in the field of community development in rural Western Oklahoma. Understanding the perceptions of experts in rural community development can assist rural higher education institutions in strategic planning, allocation of resources, and assessment of community development efforts. Additionally, the results could inform state and federal policymaking efforts that pertain to rural colleges and universities.

Statement of Research Questions

In an effort determine the essential elements of effective community development in rural Western Oklahoma and to better understand the role higher education plays, or could play in rural community development, this study explored the following research questions:

1. What did Western Oklahoma community leaders perceive to be the necessary elements for successful rural community development in their region?
2. To what extent was there consensus on the elements Western Oklahoma community leaders perceive to be necessary for effective in rural community development in their region?

3. Was there a difference from Delphi survey Round 2 and Round 3 in the predominant elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?
4. Was there a significant difference in the elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region, based on which regional Council of Government (COG) the expert in affiliated with?
5. Where did Western Oklahoma community leaders place elements related to Higher Education within the overall list of elements perceived to be necessary for effective rural community development in their region?
6. What were the implications of the community development elements identified by Western Oklahoma community leaders on state and federal policy formation and implementation?

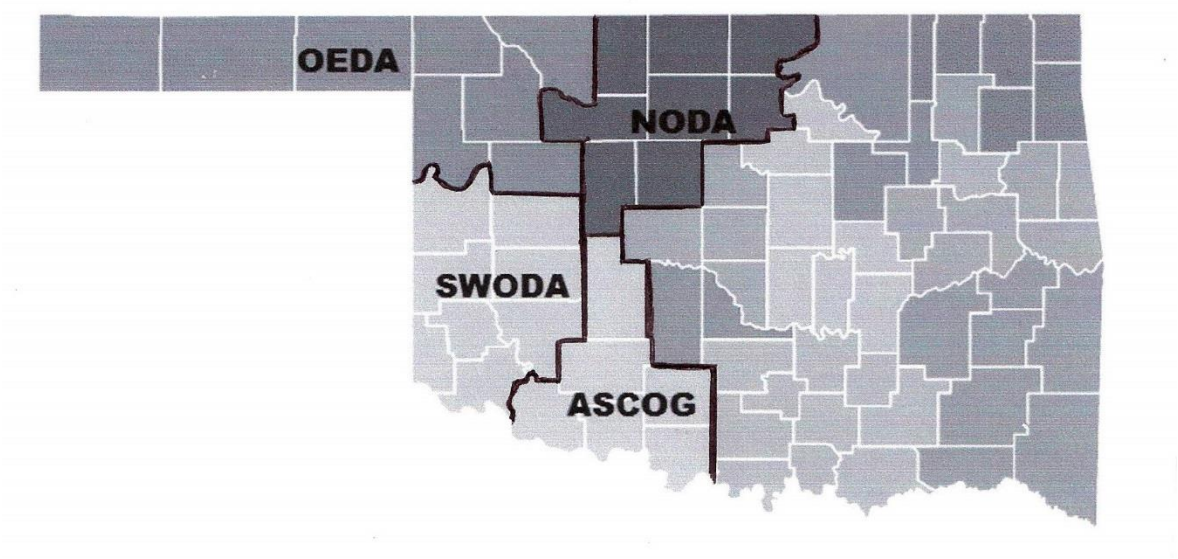
Definitions

The following terms were operationally defined:

1. *Community Development*- Green and Haines (2008) define community development as involving "a planned effort to build assets that increase the capacity of residents to improve their quality of life."
2. *Rural*-For the purposes of this study, the U.S. Office of Management and Budget (OMB)'s criteria will be used to designate counties as metropolitan or non-metropolitan. Metropolitan is defined as a county containing one or more urbanized areas with a combined population of at least 50,000. In this study, only nonmetropolitan counties will be included and "nonmetropolitan" and "rural" will be used interchangeably, as will "metropolitan" and "urban."

3. *Western Oklahoma*-In this study, counties within the 4 western most councils of government or COGs will be used (Figure 1). These include the Oklahoma Economic Development Authority (OEDA), Northern Oklahoma Development Authority (NODA), South Western Oklahoma Development (SWODA), and Association of South Central Oklahoma Governments (ASCOG). The Association of Central Oklahoma Governments, located in the Western half of Oklahoma was not used based on the fact that all counties included in this COG are designated as metropolitan by the OMB's criteria and are therefore not rural as in the focus of this study. Three of the counties in the ASCOG are also designated as metropolitan counties and will be excluded from this study.

Figure 1- Oklahoma Councils of Government Studied.



Assumptions

The following assumptions were made in this study:

1. The purposive sample accurately portrayed the broad characteristics of community development leaders in Western Oklahoma.

2. The Delphi survey technique was a valid research method for gaining consensus of community development leaders as to the elements necessary for successful community development.
3. The respondents to the survey answered all three rounds of the Delphi survey instruments without bias or confusion.
4. Leaders in community development desired to increase community resources and to enhance the quality of life for their citizens.
5. Community development can be enhanced by the addition of various elements, thereby enhancing the quality of life for community residents.

Delimitations and Limitations

The following limitations were used to accurately frame the current study:

1. The Delphi survey technique, a quasi-qualitative method, was used in this study. This technique is largely exploratory and therefore cannot be generalized.
2. Only community development leaders in rural Western Oklahoma were included in this purposive sample. Generalizations from the findings would not be applicable to all rural community leaders or community leaders from non-rural settings.
3. This study was limited to those community development leaders who agreed to participate and therefore does not necessarily represent a cross-section of community development leaders.
4. The statistical methods selected for use in the data analysis were appropriate in their use to answer the research questions of the current study.
5. The study occurred in 2014, during a significant boom in the economy in Western Oklahoma due to expansions in natural gas drilling and major investments in wind

energy in the area. Therefore generalizations may not be able to be made during other times when the economy is not the same in the area.

Significance of the Study

Students, parents, legislators and institutional governing bodies are calling for accountability for the investment being made in institutions of higher education. With an increased focus on retention and graduation rates, colleges and universities are going to be scrutinized for dollars spent on anything that diverges from those priorities. Funding allocated toward community development efforts will need to be justified and proven to be an effective investment for the institution. The results of this study have the potential to validate and enhance the efforts of higher education institutions in this work if rural community development leaders identify the institutions' work as a necessary element in effective community development.

Without ways to assess if current community development initiatives are necessary or effective, rural higher education institutions themselves are left without really knowing if they are meeting the needs of their area. Currently there is little available in the research regarding how rural communities perceive community development, how an institution can measure the effectiveness of community development efforts or how this information could influence policy. The proposed study would help to fill a void in current research in this area.

In order to determine the effectiveness of university community development initiatives, it is first important for the institution to understand what the communities they serve view as elements for effective community development. Boards of regents or trustees could utilize these findings from this study as they establish the mission of a rural higher education institution. The results could also be used by university administrators as they prioritize resources and look for new ways to have an impact on community development in their region. Those within the

academy may also be able to utilize the findings to guide their decisions about investing faculty time and talent into community development initiatives.

Rural communities could also benefit from the findings of this study. Through the study community leaders identified and rated elements they believe to be necessary to community development. If certain elements are not currently available, the findings could give them the information to move forward in seeking out funding or partnerships to be able to obtain that element and enhance the community development efforts. As community leaders also rated the elements in the study, results could also be utilized to determine current funding priorities for rural communities. Since the goal of the study is to determine to what extent there is consensus as to the necessary elements for effective community development, this study could serve as the basis of a collaborative regional development effort for the Western part of the state. A regional development effort could provide rural communities the collective bargaining necessary to get their issues on the legislative agenda.

State and federal policymakers could also utilize these findings by being able to see what their community leaders believe to be necessary elements of community development. This could also assist them in prioritizing what funding or partnerships to pursue to enhance community development efforts in their districts. It could also assist them in knowing what elements to protect as potential policies are being introduced.

Theoretical/Conceptual Framework of the Study

Flora and Flora (2008) defined assets as resources invested to create new resources as "capital" (p.17). Flora and Flora (2008) determined that communities who were successful in supporting healthy, sustainable community and economic development were focused on seven types of capital: natural, cultural, human, social, political, financial, and built. The seven capitals

of the Community Capitals Framework (Figure 3) overlap, interact, and when combined create "sustainable communities with healthy ecosystems, vital economies, and social inclusion" (Flora & Flora, 2008, p.19). However one capital can also be promoted in a community at the consumption of the remaining six capitals.

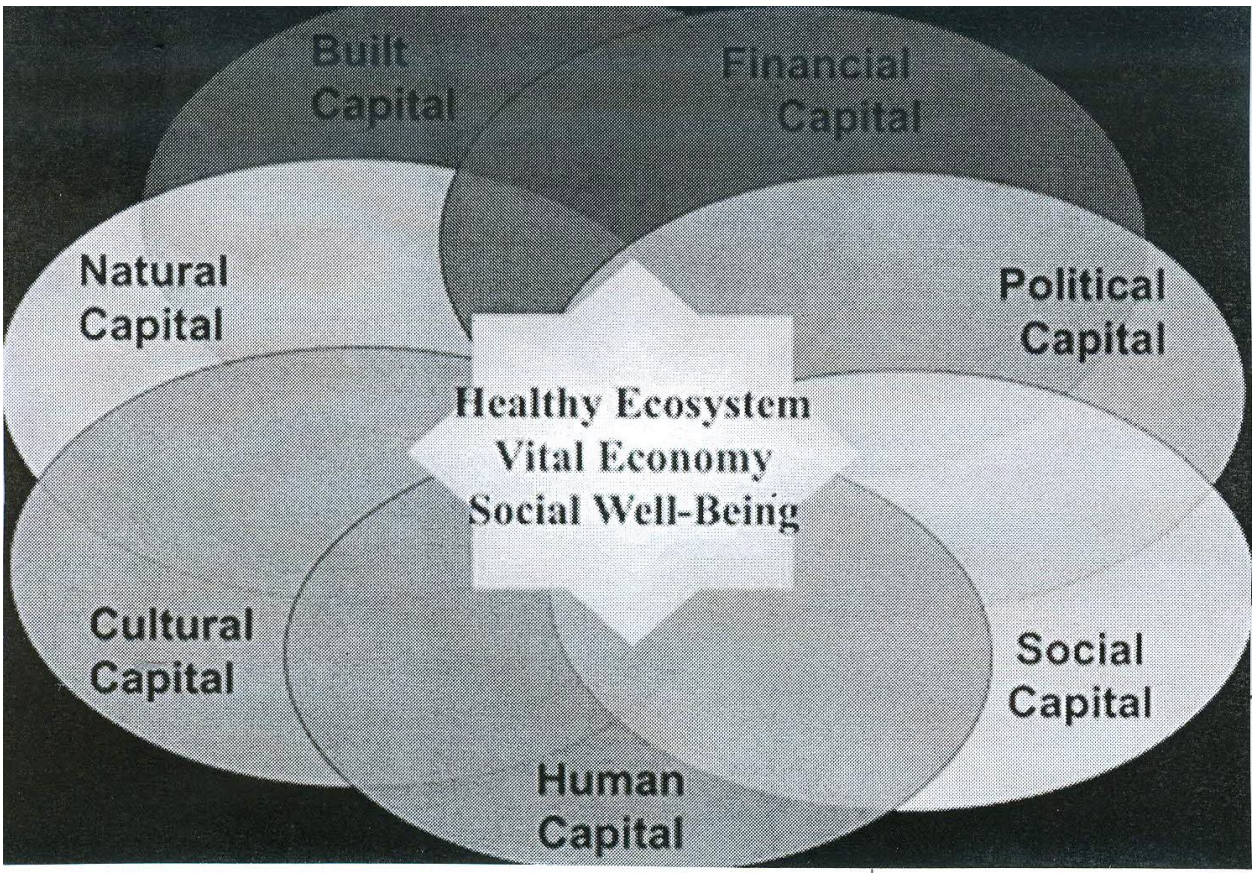
Natural capital is made up of the assets of the natural environment including the air, water, land, plants and animals (Flora & Flora, 2008). Cultural capital includes the values, rituals and things that influence day-to-day living. Human capital is defined as "the skills and abilities of each individual within a community" (Flora & Flora, 2008, p.18). Political capital is the influence a group has on making change. Flora and Flora (2008) further defined it as the "organization, connections, voice and power" of a group (p. 18). Financial capital is the money that is available for investment in the development of a community (Flora & Flora, 2008). Built capital is the entire infrastructure that supports the other community capitals previously mentioned (Flora & Flora, 2008). Finally Flora and Flora (2008) described social capital as the networks that exist in a community that contribute to "a sense of common identity and a shared future" (p.18). They also describe the establishment of a "mutual trust that exists among and within groups and communities" that also "contributes to a sense of a common identity and shared future. (p.18).

Flora, Emery, Fey and Bregendahl (2005) stated "the framework is used not only as a tool for analysis, but also a way to assist project managers in identifying boundary partners. By identifying which agencies or organizations link to each of the community capitals, projects managers can determine which organizations with which to partner (p.1)." In this same way the framework could be used both as an assessment and planning tool for university community development efforts and in identifying community partnerships.

Woolcock and Narayan (2000) focused on social capital describing it as "the norms and networks that enable people to act collectively" (p. 226). In their overview of various social capital theories they stated that "those communities endowed with a diverse stock of social networks and civic associations will be in a stronger position to confront poverty and vulnerability, resolve disputes and/or take advantage of new opportunities" (p.226). As was previously mentioned Miller and Kissinger (2007) referred to the need of a "social engine" in rural communities to facilitate these networks (p.27), a role that could potentially be filled by rural higher education institutions (Fluharty & Scaggs, 2007). Within Woolcock and Narayan's (2000) review of four perspectives on social capital, they found the greatest empirical support for the synergy perspective which finds community development through "dynamic professional alliances and relationships-between and within state bureaucracies and various civil actors" (Woolcock & Narayan, 2000, p.236). The concept concludes that each partner (government, institutions and community organizations) does not have the capability alone to create and sustain successful community development and that partnerships between these entities are required.

In the current study, the essential elements for rural community development discovered through consensus of rural community development experts were reviewed utilizing the Community Capitals Framework and specifically the synergy view of social capital to identify the roles, partnerships and areas of potential growth rural universities could play in developing their communities.

Figure 2-Community Capitals Framework (Flora & Flora, 2008)



Summary

This chapter discussed the context of the research problem, the statement of the purpose of the study, a statement of the research questions to be used in this study, definitions, assumptions, delimitations and limitations of the study, its significance and the theoretical/conceptual framework of the study. As rural community development research expands, this study fills a gap in the literature regarding the role higher education can play. The next chapter provides an overview of the literature relating to the rural characteristics, rural community development and higher education's efforts in community development. This is followed by the methodology chapter, which details the research design. The fourth chapter

provides the results of the data collected in the study while the fifth chapter will discuss the findings.

Chapter II

Literature Review

A review of literature regarding the elements for effective rural community development, as perceived by community leaders, as well as the role of higher education in rural community development, reveals that little attention has been given to either topic. Those studies found linking higher education and community development are predominantly focused on the role of rural community colleges, a function that has been a part of these institutions core mission from their creation.

Data for this chapter was gathered primarily utilizing the resources of both the John Vaughan Library at Northeastern State University and Mullins Library at the University of Arkansas. Combined, these facilities provided not only access to online academic search engines, but also interlibrary loan access.

This chapter is organized into four sections: Rural Characteristics, Rural Community Development, Higher Education in Community Development and a Chapter Summary. Each of the sections is subdivided and contains a section summary.

Rural Characteristics

There are many different ways "rural" has been defined. In many instances rather than defining rural, urban is defined and anything that does not fall into this category is deemed rural. For example in the 2010 Census, urban areas and urban clusters are outlined with specific definitions based in the population density, type of housing and characteristics of the location. However when it came to rural, the classifications stated, ""Rural" encompasses all population, housing, and territory not included within an urban area" (US Census Bureau, 2010). Even though 85% of the US geography is considered rural, it is still difficult to find a definition that

encompasses the many challenges faced by these communities.

Rural communities are more likely to have declining populations, depressed economies, lower percentages of college degree completion and higher poverty rates (Flora & Flora, 2008; Fluharty & Scaggs, 2007; Miller & Kissinger, 2007). The following sections will review the research available on these unique characteristics of rural communities including migration patterns, struggling economies, poverty, low educational attainment and the impact of rural policy.

Rural Migration

Johnson (1995) wrote that for most of the 20th Century, growth in nonmetropolitan or rural areas was due to births exceeding deaths in the area which offset the levels of net outmigration. He based this statement on the fact that the number of people leaving the rural areas actually exceeded the number entering. In the 1970s, a population turnaround was experienced and attributed to a reversal in migration patterns into the rural areas. Research indicated that this increased immigration had more of an impact on growth than natural increase (more births than deaths). At the time of the article's publication, information on the migration trends of the 1980s was "fragmented". Using the 1970, 1980, and 1990 census, Johnson showed a slow growth in rural populations that defied migration models available at the time. However, the data showed that between 1980 and 1990, there was a net out-migration of 1.5 million young adults (age 20-29) from rural areas.

After a comparison of two theoretical perspectives, Frey (1987) argued that the population losses in metropolitan areas more closely followed the theoretical perspective of deconcentration than regional restructuring. Regional restructuring attributes the redistribution of the population on the redistribution of jobs, while deconcentration attributes the relocation of the

population to changes in the preferences of individual workers. Following a method of multiregional cohort component projections, Frey compared the projections to the actual migration data from the periods of 1965-1970 and from 1975-80 using 1970 and 1980 census data. Population projections indicated that there would be a gain in metro populations during the 1975-80 period of 17.5% while in actuality, there was a population loss of 12.3%. This along with a increase in both metropolitan and nonmetropolitan communities in the South and West, support the theoretical perspective of deconcentration.

Renkow and Hoover (2000) also looked to explain the significant change in distribution of population growth by testing the popular and competing theories of regional restructuring and deconcentration. Using county-level net migration data from 1960-1990 from the state of North Carolina, Renkow and Hoover reported that their study supported the deconcentration hypothesis.

Using Census data, Greenwood (1985) reported that most of the internal migration in the United States in the 1970s provided more than 5.2 million people to the South and to the West. Greenwood wrote that people are much more likely to migrate during their young adult years. He also stated that one contributing factor to the increase in migration in the 1970s was the larger number in baby boomers at that age during the time. With the economic downturn and lack of job availability in the North and Northwest, baby boomers headed to the south and west where growth and job expansion were occurring. For the first time, the percentage of Americans living in metropolitan areas declined in the 1970s.

Fuguitt and Beale (1995) used county level census data from 1970, 1980 and 1990 and county population estimates to look at the 1970s turnaround period where outmigration from urban centers to rural communities increased for the first time in the 20th century and then the

downturn of the 1980s when greater net migrations was again seen in the cities. Fuiguitt and Beale also started to look at the trends from the late 1980s through the early 1990s indicating yet another upturn in net migration to nonmetropolitan communities. The authors attributed the latest upturn to higher drops in median household incomes in metro areas as well as greater job growth in rural communities. These two factors combined created a scenario where it was of no benefit for rural individuals to migrate to the city.

Comparing birth, death and natural increase rates for rural and metro counties, Fuguitt, Beale, and Reibel (1991) found evidence that the population decline of the 1980's was produced by a decline in fertility rates among rural women, and an increase in fertility rates among urban women. Upon closer investigation, the rural decline occurred in all age groups under 30 years of age between 1970 and 1986. However, the increase in metro births during this same increase was seen for mothers age 30 and older showing a postponement of childbearing for metro women.

Beale and Fuguitt (1990) used 1988 Census data of expected lifetime fertility to show that for the first time in the 16 years of the survey, non-metro women did not expect to have more children than metro women. Rather women in non-metro locations were now looking to have equal size families as their metro counterparts.

In Johnson and Beale (1992), the researchers used census data to argue that the population decline of non-metro areas since 1980 was due to outmigration of young adults and the inmigration of the elderly, rather than changes in fertility patterns. This loss of potential parents and surplus of older adults created a situation where deaths exceeded births, also referred to as natural decrease. The authors found that 95% of the 993 counties that have experienced a natural decrease in population between 1950 and 1987 were classified as non-metro.

Albrecht (1986) analyzed population data from 1940 to 1980 from 294 rural counties in the Great Plains region of the United States that included portions of eight states, including Western Oklahoma. The purpose of the study was to examine the population trends in non metropolitan communities and their relationship to agricultural dependence. Census data for 1940-1980 were utilized along with a path model to test the direct effects of agricultural dependence on change in population for each of the decades. Agricultural dependence was shown to have a strong inverse relationship with population change in the 1940s (-.5281), the 1950s (-.2747) and the 1980s (-.2638). No significant relationship was seen for these variables for the 1970s. Data indicated that the population turnaround seen in the 1970s in rural communities was strongly influenced by the decrease in dependence on agriculture.

Albrecht (1993) then analyzed population data from 1950-1990 for 293 rural counties, again in the Great Plains region of the United States. The focus of the study was to determine if the population turnaround that saw growth in many of these rural counties in the 1970s had ended and to determine what independent variables might have had an impact on these changes in migration patterns. Using census data from 1950, 1960, 1970, 1980 and 1990, population trends were determined collectively for the region and for each county for each of the four decades. Six independent variables were also utilized in the analysis. Collectively the Great Plains saw a total loss of around 82,000 individuals between 1950 and 1990. The data showed a 2% increase in the overall population of these counties in the 1950s, and a loss of -5.6% in the 1960s, a 5.2% population increase during the turnaround of the 1970s, but a return to the overall trend of decline in the1980s with a -3.8% loss. During the 1980s, 84% of the counties in the Great Plains had a decline in their population and 96% had more outmigration than in. Using regression analysis with the six independent variables, some variables were significantly related

to the population changes for particular decades and then not significant for others. The impact of most of the variables, including total population size, and median family income diminished over the decades to where they were insignificant to the change in population by the 1980s. The one variable that proved to consistently have a relationship to population growth from 1950-1990 was the change in the number of elderly during the decade indicating that the ability for a county to attract retirees can significantly affect growth patterns in these rural counties.

Johnson (2006) used county population data from the Federal-State Cooperative Population Estimates program to show evidence of another "rural rebound" in the 1990s. Data showed a net gain of 4.1 million in the rural population from 1990 and 2000, with almost 71% of rural counties gaining. Johnson also found that migration, rather than natural increase played a greater role in the population increase, with increases in every age group except 20-29 year olds. The largest increase was those age 60-69 indicating that seniors are retiring to rural areas. The author noted the implications this trend could have as Baby Boomers continue to retire.

McGranahan, Cromartie, and Wojan (2010) used U.S. Census Bureau data to identify more than 700 nonmetropolitan counties that lost 10% or more of their population through outmigration between 1988 and 2008. In an attempt to analyze what characteristics these counties have that differentiates them from other nonmetropolitan counties, the researchers identified two different categories. The authors used county poverty rates for 1999 as the dividing line between the two categories. Those with a poverty rate of 25% or more were labeled high poverty counties and those with a poverty rate below 25% are labeled as low poverty counties. The authors found high poverty counties to be suffering from a lack of economic opportunities including: lower education levels, higher unemployment rates and an average poverty rate of 30%. Low poverty counties have higher education levels, low unemployment,

but are isolated, sparsely populated and lack natural amenities that might attract in-migration. The authors note the importance for policymakers and rural development programs to differentiate between the two categories as they each have different characteristics and needs.

Fuguitt and Brown (1990) compared data from two national public opinion surveys administered in 1972 (1,481 respondents) and 1988 (1,284 respondents) to determine if there was a shift in the overall preference of where people would prefer to live, rural vs. urban. Using multivariate analysis, the authors determined that there had been a small shift with more preferring residence in an urban location (48% to 60%), particularly one with a population between 50,000 and 500,000. However, the study showed that preference for rural communities more than 30 miles from a large metropolitan area went unchanged between the two surveys and that it was actually the preference for small communities within 30 miles of a city that dropped from 1972 to 1988.

While Johnson and Fuguitt (2000) were unable to find a clear longitudinal pattern in United States migration from 1950-1995, they did find trends within age-groups. By taking net migration estimates that were both county and age specific, the authors were able to show the patterns for different age-groups depending on the type of non-metropolitan county. Agricultural counties showed the most significant out migration of 20-30 year olds, losing an average of 50% in the 1950s. These same counties were still losing over 40% during the 1980s. Smaller losses, 10-25%, were seen for this age group in areas that contained an urban center of at least 10,000. Commuting nonmetropolitan areas or those that chose to live in a nonmetropolitan area while still benefiting from larger urban centers, showed population growth among children and adults over the age of 30. However even these commuting areas are showing a net loss in those between 20 and 30 years of age. Johnson and Fuiguitt (2000) also show data for recreational counties

which they stated have emerged since the 1960s as the fastest growing non-metropolitan county. These counties were classified by having recreational and leisure activities. While the thought had been that these locations were appealing to retirement aged individuals, the data showed a good cross-section of children and adults over 30. However, again the greatest losses were within the 20-30 age group. Finally, those counties that contained a college showed large increases in traditional college age students (late teens-early twenties, then a sharp decline in those in their mid-twenties to age 30. Contrary to popular belief, however, the data did not show a large increase in retirees flocking to college towns. Only small consistent gains were seen for adults 35-65.

Rodgers and Rodgers (1997) found a significant effect on male heads of household migrating from rural to urban areas. Using data from 514 respondents to the Panel Study of Income Dynamics (PSID) survey from 1969-1988 and regression analysis, Rodgers reported that benefits accrue and continue to be seen for at least 6 years after the move from a rural to urban location. Rodgers estimated that the annual income for the family unit who migrated to a metropolitan location is 30 percentage points higher than what it would have been if the individual had remained in the rural location.

Mahasuweerachai, Whitacre and Shideler (2010) analyzed data to determine if an amenity such as broadband access significantly affected migration. Using regression analysis on and the average treatment effect method, county-level migration data from 2000-2006 was analyzed. The special econometric model did not show broadband access to have a significant effect on migration. The average treatment effect also did not show that counties offering a single type of broadband had a significant effect on migration, however a positive and significant

effect was reported on net migration in rural areas offering both cable and DSL broadband services, 1.4% higher than rural locations without broadband access.

Through the decades changes in migration patterns have had a significant impact on rural areas. In order to sustain, rural counties look to find ways to prevent out migration and encourage in migration through economic and community development efforts.

Rural Economy

Using Bureau of Labor statistics, Henderson (2010) reported that traditionally rural job growth trails growth in metropolitan areas. And while the climate of the agricultural economy can have a significant impact on the rural economy, rural communities are not completely dependent on agriculture to feed their economy. Retail, tourism, manufacturing, mining and the service industry are other pieces fueling rural economies.

Henderson (2002) conveyed the need for expanding entrepreneurial activity in rural America. Using U.S. Department of Labor data, he reported that the earnings of self-employers in rural areas were almost one-third higher than rural wage and salaried workers.

Gale and McGranahan (2001) used Bureau of Economic Analysis employment data from 1990-98 to show the gap between nonmetropolitan and metropolitan jobs and earnings. From 1990 to 1995, nonmetro growth outpaced metro growth peaking at 3.5% in 1994. However, after 1995, metro employment growth continued to climb at a rate of around 2.5% annually, while nonmetropolitan growth slowed. Non metropolitan job earnings at the same time fell behind metro job earnings. In 1998, the average non-metro job paid 69.1% of the average metro job. This gap amounted to $10,900 between non-metro and metro earnings. Using inflation-adjusted numbers, the data also revealed that between 1978 and 1998, the nonmetro average earnings per job had only grown $77 dollars ($24,399 up from $24,322). The authors attributed the decline to

a shift from manufacturing processes which utilize “old economy” (p.46) skills concentrated in rural areas, which require physical strength and operating equipment, to “new economy” (p. 46) skills requiring knowledge and decision-making, which are more likely to be located in urban areas.

Henderson and Abraham (2004) wrote that rural communities needed to consider ways to increase high-knowledge occupations in their areas. “Knowledge-based growth is derived from people’s knowledge or ability to combine education, experience, and ingenuity to power growth”(p.72). Using U.S. Census data, the authors reported that the average annual wage of knowledge based occupations was more than double the average wage of other occupations; however, rural communities were lagging in growth in this area. Using regression framework, Henderson and Abraham (2004) identified characteristics of rural counties that were most often tied to concentrations of high knowledge-based growth including high-skilled labor, infrastructure, local amenities and vibrant business networks. The authors did emphasize that a relationship with an institution of higher education was “crucial if rural communities are going to strengthen knowledge economies” (p.85). In addition to providing education and increasing the skills of the local labor force, universities also generate research that can lead to product development, new business, and additional jobs. Rural counties that were home to an institution of higher education had a 0.92 % higher concentration of high-knowledge occupations.

Building on the work of Dillman and Tremblay (1977), Perry (1984) surveyed Kentucky residents on economic indicators such as income, objective social indicators such as health and education, and subjective social indicators such as satisfaction with quality of life, to determine if there was a difference in the answers of those living in rural or urban parts of the state. Perry’s study shed more light on the argument that rural communities are not homogenous in that it

showed very different results for mining, manufacturing, and farming communities. While mining communities results indicated high levels of poverty and lower levels of satisfaction (69.3%), manufacturing and farming communities reported median levels of income and higher overall satisfaction for their community (84.5% and 80.8% respectively).

Besser (2003) compared service sector businesses in rural, urban and metropolitan communities that include services like banking, financial services, insurance, business services, legal services, engineering, architecture, communications, accounting and research. Besser (2003) used data collected from phone interviews conducted with 1,008 rural business owners/managers in 1995. A shortened questionnaire was also administered by phone in 1997 to 265 business owners/managers from urban communities and 410 from metropolitan communities. Business owners were first asked demographic questions before being asked to describe the major activities of their business. They were then asked to rate the level of success of their business as well as rating how important a list of business strategies was to their business and rating how much of a threat a list of external factors was to their business. Within the demographic responses, rural business owners/managers were found to be less educated, operate older businesses, and to have lower gross sales than urban and metropolitan business owners/managers. Of those businesses that were service providers, those in business services and engineering were more likely to be located in urban and metropolitan areas, while 63% of service providers in rural communities were comprised of banks, credit companies and insurance providers. Of the external factors business owners/managers were asked to rank as threats, rural businesses indicated significantly higher than urban and metropolitan businesses that product demand, cost of rent and cost of labor were threats. When asked about several factors regarding the community citizenship of their businesses, rural service provider owners/managers rated

significantly higher commitment to the community, support of community leadership and working together with other local businesses to strengthen the community as all being business strategies important for success.

Morrison (2004) examined 5 counties in extreme south central Missouri, four of which (Ozark, Douglas, Oregon and Shannon) have been labeled as persistent low-income counties (PLI) by the Census Bureau since 1950 when the term was first used. The fifth, Howell County is centrally located, shared boarders with all of the four PLI counties mentions, yet has never been labeled as a PLI county. Difference in Howell County include a history as a transportation hub, two medical facilities, institutions of higher education and career technology training, and a number of manufacturing industries. In 1998, Morrison (1999) conducted surveys of 1,238 residents of the 5 counties. Depending on the county, 59-81% indicated that they had lived in their communities for 10 or more years and while they were open to the idea of commuting to earn a better income, only 5-9% were willing to relocate in order to earn a better wage, with the exception of those in Douglas County who were still below 30%. For the 2004 study, Morrison (2004) used Lyson, Falk, Henry, Hickey, and Warner's (1993) concept of Economic Distance Value (EDV) to determine if there is a relationship between the degree of isolation and the EDV that consists of travel cost, travel time costs and cost of disrupting personal ties to the area. Some of the barriers Morrison pointed out to individuals commuting or even relocating to more prosperous locations included both physical barriers such as poor roads and social ties that kept people from wanting to leave the communities they were well established in. Once an EDV value was calculated for each of the five counties, a remoteness rank was also assigned to each of the counties depending on the cost of commuting to the nearest trade center. Counties were ranked, 1 being the most remote to 5 being the least remote. The level of remoteness was then compared to

the per capita income of each county, which indicated that there was a relationship between isolation and income. Morrison (2004) then examined persistence of this relationship by examining the per capita income for the five counties for a period of 12 years, 1988-2000, and found a persistent relationship between income and isolation. Morrison (2004) recommended that policy makers look at ways to improve transportation routes, lowering the EDV in order to reduce the isolation of county residence and increase the per capita of PLI counties. Morrison (2004) also indicated that removing barriers to higher education, both by improving transportation routes and expanding technology would also provide greater access to higher education, another key factor of increased per capita income for isolated communities.

Deller, Tsai, Marcoullier, and English's (2001) study was based on the idea that people are placing greater value on natural resource amenities and the quality of life they produce which influenced them to move to areas with these attributes. Using a modified version of the Carlino and Mills model of regional economic growth, the authors analyzed data from 2,243 nonmetropolitan counties in the United States. Five categories, with several variables for each were analyzed including: climate, recreational facilities, land, water, and winter recreation. The empirical results indicated that those rural counties with natural resource amenities experienced higher levels of growth, putting these counties in a position to capitalize on their natural resources. While some categories like weather cannot be controlled, investment in recreational facilities and infrastructure could be used to increase growth. While Deller, Marcouillier, and English (2001) discussed the steady gains in rural populations in the late 1980s and 1990s and enhanced growth of those areas identified as recreational areas, they did point out that areas suffering the greatest population decline were concentrated in those agriculturally-dependent areas of the Great Plains and Corn Belt.

With changes in the agricultural industry, the traditional economic driver of many rural locations, communities must determine ways to diversify their economies in order to grow or even survive. Higher education is mentioned as an economic driver for rural communities in some of these studies, however not as a partner in rural community development.

Rural Poverty

Using U.S. Census Bureau data, the United States Department of Agriculture (USDA)(2013) reported that in 2012, 17.7% of the population (8.5 million people) living in nonmetropolitan areas were poor. This was an increase of 0.7% from the previous year. Not only did the poverty rate increase, but the gap between metro and non-metro rates also increased from 2.4% in 2011 to 3.2% in 2012.

Using data from the 1985 Panel Study of Income Dynamics, Brown, and Hirschl (1995) found that rural households have a higher probability of poverty than their metro counterparts. Controlling for a series of contextual factors known to have an impact on household poverty (education level, marital status, age, race), the greater likelihood of poverty for rural households was not eliminated. The researchers found that regardless of race, rural households still exhibit a higher probability of poverty.

In an effort to encourage sociology researchers to take advantage of the increased attention on welfare reform and the need for poverty research, Duncan and Tickamyer (1988) reviewed reigning policy theories and noted areas lacking in research. One of the areas the authors highlighted was the need for more research regarding the characteristics of the rural poor and the circumstances that got them there or keep them there. They indicated that the misconception that rural poor lack a work ethic and prefer collecting welfare is keeping policymakers from addressing rural poverty. Statistics in the study showed that in 1984 two-

thirds of rural families had at least one employed person in the household and that only one-third of rural families were on public assistance that same year. Using Department of Commerce data, the authors compared demographics of urban and rural poor that indicated that a larger percentage of children and elderly were poor in rural areas than in urban. The authors then compared the two dominant schools of thought in poverty theory, the cultural explanation pointing to individual failure as the root of poverty and the structural explanation which places the blame on societal failure. They went on to argue that both schools of thought miss important aspects of the lives of the rural poor leading to negative social constructions that limit their value in the eyes of policymakers, also limiting movement toward the elimination of rural poverty. The authors encouraged more research that could paint a more accurate picture of rural poverty by focusing on the elements that contribute to the perpetuation of poverty. With increased understanding of the differences in rural and urban poor, the authors were optimistic that policymakers might have better information to design policy for the specific needs of this population.

In a report for the Carsey Institute, O'Hare (2009) detailed the challenges facing children living in rural areas. Using Census and United States Office of Management and Budget (OMB) data, O'Hare found that in 2007, 22% of rural children living in America were living in poverty, in families living below the poverty threshold. Rural children were more likely to live in counties with persistent poverty (82% of the U.S. counties that have experienced persistent child poverty are rural) and in deep poverty. Deep poverty is defined as families making less than 50% of the poverty threshold (10% of rural children as compared to 8% in urban areas).

Gringeri (2001) conducted an ethnographic study of 60 households in five rural Utah counties. Participants were pulled from the local food stamps or reduced school lunch program

lists. Fifty-four of the 60 participants interviewed fell into the categories of underemployed and only 22 of those had access to healthcare. The interviews revealed how most of these families were piecing together wages, public assistance as well as benefits of informal networks to try to provide for household. There were excerpts from many interviews where individuals attempting to improve their situations by working more hours or for a higher wage would end up with less to live on each month because their improved wage disqualified them for public assistance programs. Gringeri's policy recommendations included expansion of the Earned Income Tax Credit to help lift these families above the poverty threshold as well as programs to provide access to affordable healthcare and childcare for those working to pull themselves up.

Jensen, Findeis, Hsu and Schachter (1999) analyzed a stacked set of matched data files from March U.S. Current Population Surveys (CPS) from the years 1968-1993. The authors used the Labor Utilization Framework, categorizing individuals into 5 categories, sub-unemployed (not working and not looking), unemployed (not working, but looking), involuntary part-time workers (would work full-time if it was available), low-income workers (income less than 125% of the individual poverty threshold) and adequately employed. The first four categories were all considered to fall under the umbrella of underemployed. Using logistical regression models, they sought to determine if there were differences, based on residence, in making the transitions into and out of being classified as underemployed. They found that nonmetro residents who were adequately employed were 20% more likely than urban residents to fall into the category of underemployed. They also found that nonmetro residents were less likely to become adequately employed after being classified as underemployed. They also found a specific disadvantage for women in nonmetro areas in both falling into and getting out of underemployment.

Slack and Jensen (2002) documented trends in underemployment from 1968-1998, looking especially at ethnicity and rural vs. metro residence. The authors again used the Labor Utilization Framework grouping individuals into five categories. The first four categories were all considered to fall under the umbrella of underemployed. Data again used the Current Population Survey (CPS) from 1968-1998. Both descriptive and multivariate statistics were utilized and data indicated that minorities living in rural locations were victims of a double jeopardy, or face double barriers, when it came to their probability of being underemployed.

Slack (2010) analyzed data from the CPS for three-year intervals between 1980 and 2004. Since the survey asked for information regarding the previous year, the data were from the years 1979-2003. Slack (2010) looked at the percentage of families considered to be part of the working poor and divided these workers into two categories based on their location: metro vs. non-metro. During the quarter of a century of data analyzed, the percentage of rural working poor as a percentage of all working families was on average 8.8% higher than the percentage of working poor families in metro locations. During this same time period, the poverty rate among all workers has averaged 4.8%. The poverty rate among metro workers has averaged 4.3% while the rate among rural workers has averaged 6.9%. The author suggested that low-wage jobs in rural locations may be to blame and recommends policy makers take a deeper look into policies that support the low-wage worker and provide opportunities for successful transitions out of poverty.

The research consistently shows higher rates of poverty in rural communities. Higher education has the opportunity to not only provide more research in the area, but to again serve as a partner in finding pathways to reduce poverty and the additional social issues it creates or which create it.

Rural Educational Attainment

Using 2007 U.S Census data, O'Hare (2009) reported that while the rate of those who had not completed high school was relatively the same for rural and urban counties (11% for rural, 12% for urban), the difference could be seen in the percentages of those completing a college degree. Thirty-five percent of those living in urban areas had completed a 4-year college degree while only 20% of those living in rural areas.

Byun, Meece, and Irvin (2012) reviewed National Education Longitudinal Study data for students who completed high school in 1992, looking at the 8 years after graduation, to compare college enrollment and college completion among rural, urban and suburban communities. They also examined a set of factors that were considered significant in college enrollment and degree attainment and then looked at predictors of college enrollment and completion to see if there were differences for rural students. Findings indicated that the percentage of those students who did not enroll in college was highest among rural students (26%) compared to suburban (18%) and urban (16%). Attainment of a bachelor's degree or higher was also lowest for rural students (30%) as compared to suburban (40%) and urban (43%). The percentage of students with parents holding a bachelor's degree was only 20% for rural participants, with suburban and urban rates being 34% and 36% respectively. The expectation of parents for their child to obtain a degree also differed with only 70% of rural parents, 80% of suburban, and 84% of urban. Rural parents were found to be less likely to discuss academics with their child, but more likely to communicate and know their child's friends. Rural students were found to have lower standardized test scores and were less likely to take rigorous courses. Of all of the predictors of educational success tested in the study, those that were unique predictors for rural students in college enrollment were family structure (two-parent households), and church attendance.

In Deggs and Miller (2011), the authors utilized a Model of Community Expectancy as a theoretical framework to determine if attributes of rural communities held any relationship with educational attainment of their citizens. Various data was used for six counties in the Arkansas Delta and was divided into the five elements of the Model of Community Expectancy: formal education bodies, civic agencies, informal associations, religious affiliations and home life. A very strong relationship was found between adults 25 years of age and older who were high school graduates and the number of schools in school improvement, suggesting that the number of schools in school improvement is reduced as more individuals graduate with a high school diploma. A very strong negative relationship was also indicated between adults 25 years if age and older who held a baccalaureate degree and the percentage of the population who are religious adherents, indicating that rural college graduates were less likely to be classified as religious adherents.

Lower educational attainment is only one of the social issues facing rural communities, but the one most directly related to higher education. Higher education institutions have the opportunity to go beyond the role of degree granter and serve as a community partner, working with communities to increase both high school and college educational attainment through research, college prep services as well as developing efforts to reduce or eliminate barriers facing rural students.

Rural Policy

Fluharty and Scaggs (2007) identified the discrepancy between rural and urban communities in the amount of federal dollars spent per citizen. In 2001, the United States government spent $6,131 per capita on urban areas, while spending only $6,020 on rural areas, creating a nearly $5.5 billion disadvantage for rural areas. They also pointed out that this

discrepancy is even greater in the area of community development because 71% of the per capita funds previously described as coming to rural areas are what are referred to as transfer payments, or payments paid directly to rural citizens. These include Medicare, Social Security, and Farm Commodity payments. In comparison, only 48% of federal funds going into urban areas are transfer payments, leaving an additional 23% for urban areas designated to investment in community development.

Through a case study Che (2003) reported a shift in policy within the United States Forest Service in rural areas from a top-down production mindset to a bottom up approach encouraging amenity use of rural land, providing diversification to rural economies.

Henderson (2002) wrote that while rural policymakers have traditionally been focused on agricultural policy or in the recruitment of branches of existing firms, a small shift can been seen in policy supporting the growth of rural entrepreneurs.

Atkinson (2004) wrote that it was time to admit the United States' "current approach to rural development is not working" (p.11). He went on to recommend two changes that he believed must occur simultaneously in order for the policy to work. He first called for the United State federal government to make a push to phase out farm subsidies world-wide. At the same time he recommended that current farm subsidies be reinvested in developing an expanded economic base for rural communities. The author's argument was that the number of farmers is decreasing and that the subsidies are now only benefiting a small group of large farming business, with little impact on the rest of rural Americans. If this money was invested in expanding the infrastructure, skilled workforce and aspects adding to quality of life, he believed a more sustainable rural economy could be developed. He also suggested that not every rural community should be invested in, rather that growth centers with the greatest potential should be

developed drawing residents from a larger area to the center for employment. Another recommendation was that federal efforts for rural development be concentrated through one agency rather than several agencies offering smaller ineffective programs and grants. However, Atkinson also recommended that federal rural development funding be tied to a match from states in order to develop effective and "robust" (p.11) policies for rural development.

Padt and Luloff (2009) examined the transition of federal United States rural policy, starting in the 1990's, taking a more managerial approach and encouraging rural communities to become empowered. The authors used the Policy Arrangements Approach (PAA) to determine how this bottom-up rural development plan might be eliminating barriers and then conducted interviews of the community development leaders of a USDA Resource Conservation & Development (RC &D) district located in the Southern Alleghenies to assess the managerial approach in practice. The first barrier outlined as a part of PAA was the lack of shared discourse on rural development based on the fragmented structure of governance. Depending on the type of policy, decision-making may occur on the federal, state, or in one of the many local levels. Rural policy is rarely integrated in other policies because of the independent nature of federal agencies. The authors saw these as barriers to comprehensive rural development policy. The second barrier discussed were the factors inhibiting coalition building in regard to creating rural policy. Some of the reasons perceived to be contributing to this include commodity groups overshadowing community development in rural policy making, little opportunity for interaction between the federal government and local communities, a lack of collaboration at the local level, an uneven distribution of resources and the continued creation of unfunded mandates. In analyzing the Southern Alleghenies RC&D, authors interviewed a purposeful sampling of five individuals who were involved in the RC&D process at a mid-high level for an extended period of time. Through

the interviews, the researchers found evidence of fragmented government structure and multiple levels of government as barriers to policy discourse. Barriers to policy organization were then looked at. Those interviewed did not see the commodity groups as a barrier as it was generally assessed to be, and expressed the farmers in the RC&D, in contrast, to be forward thinking and collaborative within the community. The lack of interaction between the federal and local government emerged as a significant barrier with only one federally funded coordinator assigned to the district's projects. Through the interviews, lack of collaboration on the local level was not seen as a barrier and the RC&D was actually seen as a facilitator of collaboration. Lack of resources available and the restrictions placed on resources were also cited as barriers. Potential unfunded mandates connected with a federal project management system were seen as a potential barrier as more paperwork was feared to discourage the district from applying for larger grants. The authors concluded in this study that managerial approach as seen in the Southern Alleghenies RC&D, did help to remove some barriers, but amplified others, while also leaving some barriers untouched.

Without a strong champion, rural policy in both the federal and state governments is often overlooked or ignored. Higher education institutions have the opportunity to be a part or even lead out in community development efforts to bring attention to policy affecting the rural communities they are located in. Better knowledge of the elements for successful rural community development can help higher education institutions to prioritize their involvement in these efforts.

Rural Community Development

Che (2003) presented a case study about the Forest Service's National Forest-Dependent Rural Communities Diversification Act of 1990, which encouraged entrepreneurship in rural

communities to help diversify local economies traditionally dependent on timber harvests. The USFS served as the catalyst and worked with participating communities to establish an action team made up of business, civic, and government leaders. Each team then assessed the current situation, discussed opportunities for diversification in working toward sustainability, and assessed any technical assistance needed to move forward. The team then developed a budget, timeline and a list of assigned responsibilities. Micro grants were awarded as a start of for these plans and many were matched by foundation or state funding. Che (2003) specifically reported on the efforts of the action team of Forest County, Pennsylvania that worked to move away from dependence on the forest industry toward ventures in ecotourism.

Liu and Besser (2003) researched the participation of senior rural residents in community development activities. The authors encouraged rural communities to look at elderly citizens as a resource for community improvement. The authors surveyed 2,802 senior citizens over 99 rural communities in Iowa. Their research showed that those seniors with higher income levels were significantly more likely to be involved in community development activities and that males and seniors between the ages of 65-74 were also more likely to participate. The survey results also showed a significant correlation between the level of involvement in community improvement activities and the number of formal social ties seniors had.

After giving an overview of the history of regionalism and its beginnings with the establishment of the federal regional development plan creating the Tennessee Valley Authority in 1933, Lu (2011) gave an overview of the more modern grassroots concept of ad hoc regionalism. After the federal government made cuts to regional planning efforts, the responsibility of economic development shifted to local and county governments in the 1980s. In the 1990s these local entities began to look for ways they could collaborate and pool resources to

make change or solve issues facing their region. The role of these voluntary groups that are not bound by any political borders has also expanded to look at improving quality of life in the region, as well as positioned the area to be more competitive in a global market. The author then presented two case studies. The first, the Western Kansas Rural Economic Development Alliance, that was shown to have been a successful regional partnership among 53 member counties that ignored political boundaries in order to create a unified voice in an attempt to overcome the lack of attention they felt they received from the state's capital. This partnership led a coordinated effort to attract large dairy farms to the western half of the state as well as unified recruitment of both business and skilled employees. Those interviewed in the study credited success to concerted efforts to insure volunteer representation from both the northern and southern halves of the region, as well as efforts to lay down political boundaries and focus on recruiting to the region rather than to individual communities or counties. The second case study looked at the now defunct San Juan Forum (SJF) that encompassed the Four Corners region. With four different state governments, county and city governments, as well as four American Indian tribes operating as sovereign nations, the SJF had more political boundaries than it was able to overcome. Rather than the volunteer board seen with WKREDA, the SJF had a paid executive director and very little buy-in from the entities in the region. This lack of support allowed the organization to fall by the wayside when the executive director left to accept another position. In addition, the SJF also had a partnership with two higher education institutions in the region, Fort Lewis College and San Juan College. The institutions "provided nonpartisan support in education, research, and leadership development that was important to the regional cooperative endeavors," (p. 348). Lu (2011) encouraged cities and counties to combine efforts in ad hoc regional development in order to gain the voice and benefits of combined

resources in order to not only solve issues facing the region, but to also enhance the regions placement in an advancing global economy.

Green, et.al (2002) analyzed the role of local development organizations (LDO) in rural communities in America. Through surveys, the authors compared the effectiveness of economic development efforts housed within municipal governments, as compared to the work of LDOs located in the same communities. The authors found that LDOs were more active in economic development activities than municipalities, and LDOs were more effective in recruiting business and industries to their communities as well as retaining current jobs. LDOs were also more likely to recruit and retain higher paying jobs. The authors attributed the effectiveness of LDOs to the higher amount of activity they dedicated to economic development efforts and their extensive LDO network that provided both contacts and training for LDO staff.

Crowe (2006) used data collected from six communities in Washington to determine the interaction of each communities' social infrastructure and natural resources on the level of economic development, specifically in contrasting strategies of industrial recruitment and self-development activities. The study was conducted in the summer and fall of 2003, and 97 individuals completed a survey based on past questionnaires and surveys used by Flora, Sharp, Flora, and Newton (1997) and Sharp (2001) on their analyses of entrepreneurial social infrastructure (ESI). Participants were selected to represent one of 20 categories of roles in the community, such as parent, senior citizen, major employer, school board member, etc. The survey consisted of questions regarding self-development and industrial recruitment activities. The survey contained questions also pertaining to the amount of natural capital and strength of social infrastructure found in each community. A 2x2 matrix was developed positioning each community based on their level of natural capital (high or low) and their level of ESI (high or

low). A negative binomial regression was used to determine how natural capital and ESI influenced the two forms of economic development. The findings showed that all of the communities had more self-development projects than industrial recruitment in the past three years (3.84 as compared to 2.35). Results also showed that those communities with higher levels of industrial recruitment had higher levels of natural capital. However, no relationship was seen between self-development and the level of natural capital. Community linkages and active involvement in civic organizations were shown to have a significant relationship to the level of self-development in a community. Those communities with both high natural capital and ESI had high levels of both types of economic development. And, as hypothesized by the author, communities with both low natural capital and low ESI had low levels of both types of economic development strategies. Crowe (2006) also found that even though high natural capital is important in the amount of industrial recruitment, the lower the level of ESI in that community, the lower the level of industrial recruitment activities. Using negative binomial regression, the author was able to show empirical evidence that a community's natural capital has no relationship to the level of self-development. The results did show that the number of bonds passed and the number of active civic organizations do significantly impact the number of self-development projects that occur in a community. The number of civic organizations was also shown to be significant to the number of industrial recruitment activities as well.

Using mixed methods and data from 134 communities in nine north central states, Cook et al. (2009) tested a model of rural community vitality to determine what role housing plays in successful rural community development. Primary data were collected using structured telephone interviews and secondary county-level data from the 1990 and 2000 Census were used to support the interview data. The 134 communities in 48 counties were located in Illinois, Iowa, Kansas,

Minnesota, Missouri, Nebraska, North Dakota, South Dakota and Wisconsin. For each community, five to nine key informants were interviewed and included community members such as mayors, community elected officials, bankers, real estate agents and builders for a total of 951 respondents. The authors estimated a structural equation path model consists of seven contextual variables including the community's vitality in 1990, types of businesses, medical services available, community services available, current population, population change and leadership. The study tested the influence of these exogenous variables on housing planning, housing finance, housing inventory change and ultimately community vitality in 2000. The results found that all seven of the contextual exogenous variables were significant predictors of at least one of the four endogenous variables previously mentioned. Community leadership was determined to be the strongest indicator for community vitality (β=0.56) and was also shown to be and indicator of housing planning. Housing planning was shown to be a strong indicator of housing finance (β=0.33). Housing finance was a relatively small, but significant indicator of housing inventory change (β=0.9). The authors interpreted the results to support that there is a significant housing decision chain, beginning with strong rural community leadership in housing efforts that ultimately leads to community vitality.

Stedman et.al. (2009) used a mixed-methods approach to define and assess the effectiveness of community watershed organizations (CWO) in Pennsylvania. The study combined a statewide survey with in-depth interviews. The survey was mailed to the 506 CWOs in Pennsylvania. With 232 surveys returned, a 46% response rate was reached. The survey focused on determining the characteristics, missions, and functions of the CWOs. The characteristics included membership makeup, internal capacity, reason for forming, and the types of partnerships the CWO held with outside entities. The partnerships proved to be a key

component with government agency partnerships being the most common. The survey also looked at each organization's reason for forming. Some CWOs had multiple reasons, while others had a single issue they were created to address. The survey also administered a self-assessment that not only looked at the standard environmental goals of the CWOs, but also looked at the how effective the group had been at creating community capacity as a byproduct of their work. The initial part of the self-assessment looked at the accomplishments of the CWO as well as the organization's support in the community and ability to inform and mobilize its stakeholders. The authors then used the reason for formation and types of partnerships held to predict the CWO's community support and effectiveness in mobilizing the community. The data showed that CWOs that were formed around agriculture related reasons or for general concerns were more likely to report greater success in reaching their goals and in the ability to mobilize stakeholders, where those CWOs that were formed in regard to land-use concerns reported less in gaining community support. The partnerships held by CWOs also appeared to indicate a strong sense of effectiveness. Bivariate correlations found strong relationships between self-assessed effectiveness and all of the external partnerships held by the CWO, strongest in partnerships with local nongovernmental entities such as chambers of commerce, business and civic groups. OLS regression was then used to assess both the mission and partnership factors contributing to effectiveness. Again partnerships were found to be important to the self-assessment of effectiveness. In this analysis, partnerships with government entities, especially local government, were shown to have positive outcomes. The authors then conducted 28 in-depth interviews that reinforced the understanding of capacity building through partnerships.

In Flora et al. (1997), the authors sought evidence to support their hypothesis that those communities with a stronger entrepreneurial social infrastructure (ESI) would be more successful

in economic development efforts than those communities with a low ESI value. The study used a national random sampling of elected and appointed leaders from 1099 nonmetropolitan communities in 1994 and 1995. The response rate was 65.3% with 718 completed surveys. The survey started with questions regarding the dependent variable, asking if their respective community had been successful in the last 10 years in economic development activities and then asked the respondent to describe those activities. These activities were divided into the categories of self-development and recruitment of outside firms. The participants were then asked a series of Likert-type questions regarding the three concepts within the ESI Model: legitimacy of alternatives, mobilization of resources, and network qualities. The operationalization of these concepts became the independent variables in the study. Population was controlled for. To look at the relationships between variables, the test of differences between means and logistic regression were used. In the test of differences between the independent variables and the existence or lack of an economic development project, positive significant differences were found for 8 of the 10 independent variables in communities where an economic development project existed. No significant relationship was found for the number of opposing positions during a controversy or in the opportunities for citizens to have input in the local budget. Significantly larger numbers were seen for communities with projects in the number of horizontal and vertical linkages to other communities as well as regional and state government and organizations (9.57 communities with projects vs. 5.01 communities without a project). The number of contributions from financial institutions to local initiatives was also significantly higher for communities with economic development projects than for those without (1.67 communities with projects vs. 0.66 communities without a project). Using logistical regression, the multivariate analysis found communities with economic development projects were

significantly more likely to have an unbiased newspaper, several types of financial institutions contributing to community initiatives, a large number of horizontal and vertical linkages to other communities and state and regional government and organizations and fewer formal mechanisms in place for citizen participation in the budgeting processes of local government. The authors concluded that there was evidence of a relationship between ESI and local economic development and that there was suggestion from the data that successful economic development strategies were based in a community's civic efforts rather than in the involvement in local government efforts.

Higher Education in Community Development

Cohen (1998) identified teaching as the original focus of the university, with academic research soon becoming a secondary function of the university in the late 19th century. Service was the third addition to what is now considered the triad of academia. While that category also includes service provided to the institution by its faculty and staff, community service is becoming a more recognized role of higher education institutions. While American higher education was shaped by models from England and Germany, service to the community was an aspect Cohen (1998) described as "indigenous" (p.114).

The Morrill Act of 1862 established land grant universities. One of the major functions of these institutions was to provide public service in return for federal funding (Mayfield, 2001). Wiewel and Broski (1997) described the concept of the land grant university as being "based on the belief that the university should be useful to its community in a direct and applied way, not just through the education it provides or the long term potential benefits of pure research" (p. 1). While land grant institutions have a strong history of providing service to the community, Mayfield (2001) described the role as traditionally one directional, with the university serving as

the authority and imparting knowledge onto members of the community.

Boyer (1996), however, encouraged members of the higher education arena to apply their knowledge, research and resources "to our most pressing social, civic, and ethical problems, to our children, our schools, our teachers, to our cities" (p. 19-20). In some of the more modern service models, both the community and the university work together to benefit each of the entities and their combined communities. "This new approach emphasizes a shift from an expert model toward a more collaborative model where community partners play an equal (although different) role, creating and sharing knowledge to the mutual benefit of institutions and society" (Sandmann, Williams, & Abrams, 2009, p.17).

In 1992, the Ford Foundation pilot tested the Rural Community College Initiative (RCCI) in an effort to increase college access and encourage economic and community development in rural areas. The community college was the tool the Foundation tapped to create change (Garza & Eller, 1998).

Miller and Tuttle (2007) used a grounded theory case study to study how rural community colleges serve as a central social mechanism for the communities they are in and how they positively influence the citizens' and communities' self-identity. The study looked at three rural community colleges, with one college each in Alabama, Arkansas and Mississippi. A total of 79 interviews were conducted including students, faculty, staff, community representatives, as well as local business, civic and non-profit organization leaders. Grounded theory and constant comparison were used to allow themes to naturally emerge from the interview data. From the interviews, four major themes developed in relation to community identity including: inclusiveness, community pride, value-added community, and town-defining colleges. Miller & Tuttle go on to discuss how legislators should consider these additional roles

played by higher education institutions in rural communities and invest accordingly. At the same time the authors encourage the institutions to take the responsibility of assessing their own services to see if there are ways to collaborate with other community entities to improve, expand, or even streamline services to the community.

Since the RCCI effort was initiated, other higher education organizations have looked to also expand the role of their institutions into community development. For example in 2004, the American Association of State Colleges and Universities (AASCU), in conjunction with the Alliance for Regional Stewardship (ARS), and National Center for Higher Education Management Systems (NCHEMS) launched an effort within state colleges and universities titled *Making Place Matter* where institutions were encouraged to be good regional stewards of their communities and expand their roles as community partners (ARS, AASCU, & NCHEMS, 2006). Several studies have looked at the characteristics, benefits, success and challenges of university-community partnerships.

Strier (2011) looked at a university-community partnership in Israel focused on combating poverty and social exclusion called the Haifa Partnership for the Eradication of Poverty (HPEP). Conducting a qualitative study of the experiences of partnership participants, their stories were then analyzed utilizing a social constructivist lens. The four main research areas of the study explored the experience of the partnership, the perceptions of the partnership, the barriers to partnership building, and the impact of the partnership on participants. The partnership had an egalitarian structure in an effort to counterbalance the unequal power of all participants. Participants noted this structure was unlike previous partnerships they had been involved in. Community participants commented that they appreciated the fact that the academic participants came in "with more questions than answers" (p.87). While some participants

appreciated the non-hierarchical structure of the HPEP partnership, others found it confusing without established roles. Multiple definitions of the social problem conflicted between the academic and community participants, which the authors found had an impact on how the participant evaluated the effectiveness of the partnership.

Mullins and Gilderbloom (2002) conducted a case study looking at the effectiveness of a specific partnership between a university and community in Louisville, Kentucky. This $2 million partnership was an effort to revitalize the area through an urban renewal project called the University of Louisville Housing and Neighborhood Development Strategies program (HANDS). This program included case management, educational and career assistance, leadership and home ownership training as well as community design, historic preservation, traffic calming design and urban infrastructure assistance. In this study 24 business, community, government, and university leaders were interviewed based on their involvement in the partnership. Participants were first asked why the university should get involved in community partnerships. Answers fell within the categories of civic responsibility, academic inquiry and institutional survival. A majority of interviewees (23 of 24) indicated that the university should be the one to take the lead in getting involved in community partnerships. Interviewees were asked about the different roles they saw that the university played in community development. The roles presented to the interviewees were of the university serving in the roles of technical assistant (22 of 24), mediator (14 of 24), leader (18 of 24), funder (15 of 24), and facilitator (22 of 24). Some of the drawbacks of a university–community partnership mentioned by participants were the cumbersome university processes or "red tape" (p. 174). Others were turned off by the promotion of the university's involvement in the project viewing university personnel as "media hungry" (p. 174). Finally those participants who were faculty members discussed the lack of

recognition for individual community involvement in the tenure and reward systems of the university.

Wiewel and Broski (1997) offered another urban university-community partnership case study looking at the Great Cities programs at the University of Illinois at Chicago (UIC). The institution decided initially that rather than starting completely new initiatives, to identify the programs that already existed at UIC that might fall within the concept of Great Cities, which focused in improving the quality of life in the Chicago metropolitan area. During this inventory process the steering committee identified 212 programs already taking place at UIC. Some of these programs were consolidated under the umbrella of a new College of Urban Planning and Public Affairs. New programs were developed including the Great Cities Institute, an interdisciplinary urban applied research center, the Great Cities Faculty Seed Fund providing financial incentives for faculty to engage in applied research or outreach to the surrounding community and the UIC Neighborhoods Initiative, a comprehensive neighborhood revitalization partnership. During partnerships, Wiewel and Broski (1997) pointed out, universities bring a set of unique resources, but it is critical that the how those resources are used be a joint decision between partners. The authors stated that both the university and community are expected to change as a result of the cooperative process. Previous to starting the UIC initiatives, a history of distrust by the community had to be overcome. A series of interviews, focus groups and meetings with individuals were initially conducted to assess the community's previous experiences with the university. The participants were then asked what they believed partnership opportunities were with the university and then how those they felt those opportunities should be approached in a effort to begin to reestablish trust. The authors stressed the importance of members of a partnership to understand the strengths and weaknesses of the other partners.

Wiewel and Broski (1997) identify some of the strengths of a university as the availability of experts in a variety of areas, multiple funding sources, the perception of the institution as relatively neutral, and the ability to look at issues with a long-term perspective. Weaknesses were then identified as the autonomy and lack of accountability of faculty, the academic disciplinary boundaries or territories and funding-driven research. Outside partners generally raised issues with the inaccessibility and lack of transparency of the university during the partnership. On the flipside the strengths of community partners were identified as their knowledge of community issues, structure and leadership, their ability to create legitimacy for the project with marginalized populations involved, and their commitment to improving the community. Weaknesses of community partners were identified as being prioritized with the survival of their organization, limited by the experiences of their organization, and not having the manpower or resources to handle the additional workload required for the partnership.

Bringle and Hatcher (2002) looked at campus–community partnerships and compared the stages of development to close relationships such as friendships or romantic couples. Their purpose was to gain insight into how an effective partnership can be developed. They found the most effective partnerships to be those where both the university and community partner viewed the relationship as equal, with an even distribution of power and benefits (Bringle & Hatcher, 2002).

Cox (2000) offered a framework for understanding university-community partnerships, specifically focusing on HUD's Community Outreach Partnership Centers (COPC) program. This framework credits the success of partnerships, not to the common goals of the partnership, but rather understanding the individual goals of each member of the partnership. Using the example of COPC, Cox described the primary interest of the community as the building of

additional housing. He went on to suggest the primary interest of the higher education institution may be providing practical experience for students and research opportunities for faculty, while a government funding agency's primary interest may be to use the expertise of the faculty experts to refine their own neighborhood revitalization policies. In the framework, the author uses the answers to three questions to guide its development: "What types of activities or programs are implemented to improve neighborhoods?", "Who are the parties involved in or affected by those activities?" and "What are individual interests of those parties in the community improvement activities?" (p. 10). With differences in interests, partners may have differences in how they define success, and the strategy they prefer to reach it. By working to meet both the common goal of the partnership as well as understanding the individual goals of the partners, Cox found the partnerships have a greater chance of being successful and for partners to stay engaged in the process.

Beer and Cooper (2007) however, focused on the obstacles created by the culture and structure of the university in its ability to participate effectively in community development. Their case study analyses the closing of an automotive plant in Australia and the creation of a community task force, which the university was a part of. "Regional partners have high expectations of universities"(Beer and Cooper, p. 1082). Through a survey of all of the non-university members of the task force, the authors found that those surveyed classified the university processes as confusing, out of touch with reality, and unable to meet their expectations for what they felt needed to be accomplished in the situation.

Community development is not limited to what a university is doing off campus. Bruning, McGrew, and Cooper (2006) completed a quantitative study surveying community members about their attitudes and perceptions of a local university and found that citizen

participation on campus can also play an important role. A 42-question survey was mailed to 800 residents of rural community in which a college is located and 226 were returned for a response rate just over 28%. The survey focused on two areas, the community members' attitudes toward the university and their perceptions of the relationship between the university and the community. Respondents were asked to indicate the level to which they agreed on a scale from 1 to 7. Questions inquired as to how trustworthy and open the university was, how willing the university was to invest in the community and how committed the institution was to the community. Participants were also asked if they felt the university was a positive asset to the community and whether or not they had attended an event on campus in the last six months. The questionnaire finished with an open-ended question asking the respondent what one thing they wished the university would do. They found that those who had attended a campus event in the last six months were more likely to respond favorably about the university. Of the 72 participants who had attended a university event in the last six months, 96% indicated that they felt the university was an asset to the community. Those who had visited campus were significantly more likely to have indicated that they believed the university to be trustworthy, open and making and investment in the community. The authors indicated that by sharing resources with the community by inviting community members to participate in university sponsored events, the university was increasing the image of the institution in the eyes of community members, but also developing their image as participating in community development by sharing resources with citizens.

After giving a overview of the history of Higher Education and the move from pure research to the Boyer model, Mayfield (2001) identifies some of the issue and barriers higher education institutions face as they attempt to be involved in collaborative community

development efforts. The author points out that institutions of higher education are accustomed to looking inwardly when developing policies, academic programs and research priorities. Mayfield suggests a way institutions might be more apt to collaborate is through external funding opportunities through private foundations of government agencies that require community collaboration. The author does not deny the fact that this type of research will be challenged by the academy and may dismiss it as applied work or question the objectivity of research produced from a collaborative community effort. Mayfield suggest the change will occur as collaboration becomes more important to administration. The author pointed out that while many institutions do not include service in consideration for promotion and tenure, more institutions are moving to the Boyer model where service or the "scholarship of outreach" is taken into account. With this shift, opportunities for higher education to be involved in collaborative community development projects and research could be dramatically expanded.

Chapter Summary

A review of the literature relevant to higher education in rural community development has been provided. The first section reviewed the characteristics of rural communities including migration, economy, poverty, educational attainment and policy. Section two examined rural community development. Section three reported on higher education in community development. Limited research is available in the area of rural community development and a gap exists in defining the elements necessary for successful rural community development. Research was also limited in rural community-university partnerships. Identifying the elements necessary for successful rural community development can assist the leadership of institutions of higher education in planning and prioritizing the institutions' efforts in rural community development. This information could also inform policy making not only at the institutional level but at the

system and state levels as well. In the following section, an overview is provided for the proposed methodology for this study which sought to find consensus as to the elements necessary for successful rural community development and the role of higher education institutions in these efforts.

Chapter III

Methods

As higher education institutions look to plan their future endeavors in community development, reliable information about the current needs of their service area are critical (Lindstone & Turnoff, 1975). Rather than relying on the opinions of a single expert, the Delphi technique, which combines qualitative and quantitative processes, allowed for multiple experts to reach consensus regarding the necessary elements of effective community development in Western Oklahoma. This method assisted in identifying dominant themes and perceptions (Miles, 1997). Experts, through a series of questionnaires, can help to identify issues, prioritize needs, and evaluate potential solutions (Borg & Gall, 1983; Miles, 1997; Rojewski, 1990). By using multiple experts, a larger quantity of ideas can be generated and developed (Miles, 1997; Van de Ven & Delbecq, 1974). The information collected in the study could potentially be the foundation for future research and policy development (Miles, 1997).

This chapter details the research methodology utilized in the study. The chapter is divided into four sections. The first section describes the participants that were sought out for the study. The second section describes the design and instrumentation, while section three discusses the collection of data. The analysis of the data collected is explained in section four followed by a chapter summary.

Participants

Twenty rural community leaders were nominated to participate in this study. While there are different theories on the size of group to use in a Delphi study, the general recommendation is for 15-30 people when using experts out of the same discipline (Clayton, 1997; Delbecq, Van De Ven, and Gustafson, 1975; Moore, 1987; Uhl, 1983). Since these experts all came out of the

community development arena, 20 was the target number selected. These participants were residents of rural communities represented by the four Councils of Government (COGs) located in the western half of Oklahoma. Miles (1997) utilized senior university administrators to nominate expert student participants for her study. Based on Miles' success in gaining participants utilizing this process, the current study utilized the executive directors of the four rural Western Oklahoma COGs were each asked to nominate five rural community development experts from the membership lists of their COG for a total of 20 expert participants (Appendix A).

Design and Instrumentation

The Delphi research technique is a product of the Research and Development (RAND) Corporation (McKenna, Keeney, & Bradley, 2004). The method allows participants to express their opinion without the influence of others, because respondents do not meet. (Kreber, 2003; Myllylä, 2006; Sackman, 1975). This technique also allows for individuals with a variety of expertise, from a variety of locations, to be included in a study without having to orchestrate a face-to-face meeting. (McKenna, Keeney, & Bradley, 2004).

Experts in the field of study complete two or more rounds of questionnaires until consensus is reached (McKenna, Keeney, & Bradley, 2004). Questionnaires are developed by the director of the research and can be sent by mail, email or can be administered through personal interviews (Miles, 1997). The researcher compiles the responses and then provides a report of all responses to participants so that they may review, reflect and if they choose, modify their initial response based on the responses provided by all participants (Kreber, 2003).

Collection of Data

After Institutional Review Board approval was obtained (Appendix B) and the potential participants were identified, they were sent an email (Appendix C) explaining the purpose of the study, briefly describing the Delphi technique procedures and asking them to commit to three rounds of questionnaires. A schedule of when those questionnaires would be and when each needed to be returned was included (Appendix D). The first round questionnaire (Appendix E) was also included in this email. In the first questionnaire the participants were asked "Please identify five elements you feel are necessary for successful community development in rural Western Oklahoma." Respondents were given a deadline of one week to email their responses. Email and telephone follow-ups were used if experts did not respond by the established deadline.

After responses were received, a list of all unduplicated responses were compiled. Combined responses were verified by a review panel consisting of current candidates or recent graduates of the Public Policy PhD program at the University of Arkansas. This group all have a background in higher education and community development that allowed them to make educated recommendations. Panel participants were asked to identify any disagreements they have with the combinations that were made. This list of unduplicated responses (Appendix G) was then be emailed in the second round email (Appendix F) and respondents were asked to rate each of the elements identified on a five-point Likert-type scale based on their level of agreement that the element is necessary for successful community development in rural Western Oklahoma (1= No Agreement, 2= Little Agreement, 3=Medium Agreement. 4= High Agreement, 5= Very High Agreement) (Miles, 1997). Respondents were given a deadline of one week to email or fax their responses. Email and telephone follow-ups were used if experts did not respond by the established deadline.

Using descriptive statistics, the responses from the second questionnaire were assessed to determine the mean, median, and mode for each element rated by the experts. Those elements that received a mean ranking of 4.0 or higher from the respondents were compiled into a list. This list (Appendix I) was emailed to each expert in the Round 3 email (Appendix H), which included their individual responses to the Round 2 questionnaire and the mean, median, mode, and standard deviation found for each element. The experts were asked to review their responses from the second round, and compare them to the statistical information and consensus identified through the process. They were then given the opportunity to revise their responses in the third questionnaire if they chose (Borg & Gall, 1983; Miles, 1997; Rojewski, 1990). Respondents were given a deadline of one week to email or fax their responses. Email and telephone follow-ups were used if experts did not respond by the established deadline.

Data Analysis

1. What did Western Oklahoma community leaders perceive to be the necessary elements for successful rural community development in their region?

The first research question was answered by the expert participants through a modified Delphi research technique, which utilized three rounds of questionnaires. In the first round of questionnaires the participants were asked to identify the elements they see as necessary for successful community development. An ordered list was then developed using the composite mean scores for responses from participants as to their level of agreement that each element is necessary for successful community development in their region. The list indicated the relative degree of importance for each element.

2. To what extent was there consensus on the elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?

Utilizing the Likert-type scoring in Round 2, the participants indicated their level of agreement that each element collected from the expert participants is necessary for successful community development in Western Oklahoma. The mean scores were then determined for each element which will demonstrate the level of consensus reached by the participants for each element. Consensus among the experts was indicated by a composite score of 4.0 or more for an element.

3. Was there a difference from Delphi survey Round 2 and Round 3 in the predominant elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?

The group mean score of each element with a score of 4.0 or higher on a 1-to-5 Likert-type scale in the Round 2 survey, was compared to the group mean score of the same element from the Round 3 survey.

4. Was there a significant difference in the elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region, based on which regional Council of Government (COG) the expert in affiliated with?

Scoring was compared based on COG membership. Participants represented one of 4 COGs. Since the data collected is ordered-categorical data, an ANOVA was then be conducted to test the means of a continuous variable across the multiple variables (Berman, 2007). This analysis determined if there was a variation in the scores of the top elements from the composite ranked list of mean scores for the 4 sub-groups.

5. Where did Western Oklahoma community leaders place elements related to Higher Education within the overall list of elements perceived to be necessary for effective in rural community development in their region?

In the final list of elements, those elements relating to higher education were highlighted and scores reviewed to determine how necessary community leaders in rural Western Oklahoma perceive these elements to be in order for effective rural community development to occur. Again, the mean, median, and mode were assessed.

6. What were the implications of the community development elements identified by Western Oklahoma community leaders on state and federal policy formation and implementation?

Based on the results of the list, top priorities are discussed utilizing the Community Capitals Framework, specifically the synergy view of social capital, as to their policy implications. Also where higher education elements fall in the list will determine the implications for higher education policy.

Chapter Summary

This chapter described the methodology utilized for this study. The participants, research and instrument design, data collection process, as well as the data analysis were all described as they were used to conduct the study.

Chapter IV

Results

Introduction

Institutions of higher education are challenged daily to meet the demands of a wide variety of stakeholders. A call for greater accountability from these stakeholders has made it necessary for institutions to be able to provide validation for how they are spending public and private dollars. In addition to the traditional roles of education and research, institutions of higher education are also involved in a variety of community development efforts. In order to assess if those efforts are successful and provide justification for the resources dedicated to them, it would be valuable to know what the leaders in these communities perceive to be essential elements in the process. In this study rural community development leaders identified the elements necessary for effective rural community development through the Delphi method, a consensus building process. The current chapter outlines the steps used in this study and is broken into four sections: Summary of the Study, Data Collection Results, Data Analysis and a Chapter Summary.

Summary of the Study

The purpose for conducting the study was to determine the essential elements of effective community development in rural Western Oklahoma and to identify what role higher education institutions play or could play regarding these essential elements. The study was completed using an exploratory survey research method with experts in the field of community development in rural Western Oklahoma. Understanding the perceptions of experts in rural community development can assist rural higher education institutions in strategic planning, allocation of

resources, and assessment of community development efforts. Additionally, the results could inform state and federal policymaking efforts that pertain to rural colleges and universities.

Over the last two decades there has been an increased push for accountability for the investment being made in higher education institutions not only from legislators and governing boards, but from parents and students as well. Retention and graduation rates have had to become new focus areas for colleges and universities who in response, have created positions, and task forces dedicated to both research and strategic planning in these areas. With funding being more tightly tied to these rates, expenditures outside of these priorities have become more closely scrutinized. An institution's involvement in community development efforts in the region it serves will need to be able to provide evidence that their involvement and investment are effective. In order to determine if the efforts are necessary and effective, it must be determined how effectiveness will be assessed. In order to assess their efforts it, it is first important for a college or university to understand what the communities they serve believe to be necessary components for community development. This study will focus on identifying and prioritizing those components. With this knowledge university administrators and faculty could develop a tool with which they could assess their current community development efforts or could use to plan future efforts to meet the needs of the communities they serve.

Rural community development leaders identified and rated elements that they believe to be necessary for effective community development. The study was focused on rural communities in Western Oklahoma. Results from this study could be used as support for seeking funding or partnerships for elements where a high degree of consensus was reached identifying it as a necessary component for effective community development. Communities could also utilize the findings to prioritize funding or in strategic planning for their own development efforts.

This study sought to find consensus in community development experts across the state. The finding could also be utilized to create collaborative regional development efforts for rural communities in the Western half of the state. With this collective effort, issues pertaining to some of the elements found to have a high degree of consensus that have an impact on rural communities, could have a better chance of making it to the legislative agenda.

Findings could also be taken into account by state and federal policy makers giving them some insight into what rural community development leaders believe to be necessary components critical to effective community development. The information could be helpful as they look to allocate resources or in identifying partnership possibilities that could enhance their district. Knowing what elements are perceived to be necessary could also assist legislators in know what elements to protect as new legislation and policies are being considered.

The Delphi survey technique was used as the methodology for this study. The Delphi technique is a quasi-qualitative research method that utilizes experts in a given field of study to first respond to an open-ended question. Consensus is then developed around the answers to the question through a series of questionnaires using a Likert-type structure.

The rural community development experts who participated in this study were first sent a questionnaire which included one open-ended question and asked for up to five responses (see Appendix D). All answers were then combined into a list of all unduplicated answers. These responses were then used in the second survey, where the experts were asked to rate each response on a Likert-type scale as to their level of agreement. The experts rated each item from 1 (No Agreement) to 5 (Very High Agreement). The third survey was then constructed based on the responses to the second survey. The third survey included all of the items from the Round 2 survey which received a mean score of 4.0 or higher. A collective mean score of 4.0 was

determined to indicate a high level of consensus within the group. In the third survey each of the experts was shown the mean, median and mode for each of the items with a mean score of 4.0 or higher along with the score they had individually rated each item in the Round 2 survey. The experts were then asked to rate each item again.

A sample size of 20 rural community development experts working in Western Oklahoma was determined to be appropriate based on previous Delphi studies. To determine if there were differences in the level of agreement depending on the location of the experts within the Western half of Oklahoma, the Executive Director of each of the four Councils of Government (COGs) were asked to nominate five community development experts working within their service area.

Data Collection Results

A total of four nomination email requests were sent to the Executive Directors of the four rural COGs located in the Western half of Oklahoma (see Appendix A). Each Executive Director provided the names of five individuals in their service area they considered to be experts in rural community development in Western Oklahoma for a total of 20 experts. These experts were contacted by email (see Appendix B) on May 6, 2014 and asked to participate in the Round 1 survey and return their survey by email or fax by May 13, 2014. A proposed schedule of the study (see Appendix C) was included. A reminder email was sent one day prior to the due date and again on the due date. Individuals who did not return the survey by the due date were contacted by phone. Twenty surveys were completed in Round 1.

The Round 1 survey (see Appendix D) requested each individual to identify five elements necessary for successful community development in rural Western Oklahoma. With 20 respondents, a total of 100 individual answers were collected in the raw data. These answers

were then combined and edited into a list of 41 unduplicated responses. The list was reviewed by a panel consisting of current candidates or recent graduates of the Public Policy PhD program at the University of Arkansas. The panel found no disagreements with the combination of answers that were made in the compilation of the list. The list of items was then emailed to the 20 expert participants as the Round 2 survey (see Appendices E & F) and those individuals were asked to rate each of the 41 elements on a Likert-type scale of 1 to 5 based on their level of agreement. The Round 2 Survey was sent on May 28, 2014 and participants were asked to return their survey by email or fax by June 4, 2014. A reminder email was sent one day prior to the due date and again on the due date. Individuals who did not return the survey by the due date were contacted by phone. Twenty surveys were completed in Round 2.

Once the Round 2 surveys were returned, the mean, median and mode were calculated for each of the 41 elements. All elements with a mean score lower than 4.0 were eliminated from the Round 3 survey to help facilitate the reaching of consensus. The remaining 13 elements were then emailed to the 20 expert participants as the Round 3 survey (see Appendices G &H), along with the mean, median and mode for each element. In addition the individual expert's original score for each element from the Round 2 survey was included. Taking that information into consideration, the experts were asked to rate each of the 13 elements on a Likert-type scale of 1 to 5 based on their level of agreement. The Round 3 Survey was sent on June 10, 2014 and participants were asked to return their survey by email or fax by June 17, 2014. A reminder email was sent one day prior to the due date and again on the due date. Individuals who did not return the survey by the due date were contacted by phone. Twenty surveys were completed in Round 3, for a final response rate of 100 %.

Data Analysis

To fulfill the purpose for conducting the study, the following research questions were developed. Each question is presented below with the corresponding reporting of data and subsequent question answer.

1. What did Western Oklahoma community leaders perceive to be the necessary elements for successful rural community development in their region?

The first research question was answered by the 20 expert participants through a modified Delphi research technique, which utilized three rounds of questionnaires. In the Round 1 survey, participants were asked to identify the elements they see as necessary for successful community development in rural Western Oklahoma. The answers from the respondents were compiled into a unduplicated list of 41 community development elements and sent back out to the experts in a Round 2 survey in which the experts were asked to indicate on a 5-point Likert-type scale, their level of agreement that the element was a necessary element of successful community development in rural Western Oklahoma. All 20 experts participated in this round. The descriptive statistics from the Round 2 Survey are reported in Table 1 (Appendix J).

Of the list of elements, the respondents demonstrated a high level of agreement on 13 of the items which received a mean score of 4.0 or higher. The highest agreement among the expert participants was found in the following elements: Availability of Water (mean 5.0), Utility Infrastructure (mean 4.75), and Transportation Infrastructure (mean 4.60). Those elements receiving the lowest agreement from the group were Less EPA control (mean 2.6), Federal government out of state business (mean 2.55) and Get rid of Obamacare (mean 2.40).

Within the initial list several major themes arose. Many of those receiving the greatest level of consensus were those involved basic community infrastructure which included elements

such as availability of water, utilities, transportation infrastructure, communications infrastructure, healthcare, public education, safety and housing. Another category that contained elements with high levels of consensus were those that involved economic development including the availability of jobs, quality workforce, and funding, in addition to land development and methods to attract additional industry. One of the other larger themes that emerged involved the social capital of the community including community involvement/support, community drive, shared community vision, and spirit of communication, cooperation and openness.

2. To what extent was there consensus on the elements Western Oklahoma community leaders perceive to be necessary for effective in rural community development in their region?

In Round 3, the experts rated their level of agreement with the 13 elements which had achieved a group mean score of 4.00 or higher (on a 5-point Likert-type scale) in the Round 2 survey. These 13 elements varied in their Round 2 mean score from 4.00 for several elements, representing the lowest agreement levels, to a mean score of 5.00, representing the highest agreement level.

In the Round 3 rating of the 13 elements with the highest consensus from Round 2, four had an agreement mean score greater than 4.50: Availability of Water (mean 5.00), Utilities Infrastructure other than water (i.e. sewer, gas, electric, trash, storm drainage) (mean 4.8), Transportation Infrastructure (i.e. roads, bridges, highways) (mean 4.6), and Availability of Quality Workforce (mean 4.55). Also in the Round 3 rating, one element had a group mean score below 4.00: Safety (police, sheriff, fire, etc.) (mean 3.90). A comparison of the mean scores from the Round 2 and Round 3 surveys for the 13 elements has been provided in Table 2.

Therefore respondents demonstrated a high level of consensus for the items in the Round 3 survey and agreed most strongly that the single most important element for successful rural community development in rural Western Oklahoma was the availability of water.

Table 2

Descriptive Statistics for Round 3 Responses- Successful Rural Community Development Elements

Element of Community Development	Mean	Median	Mode	SD
Availability of Water	5.00	5.00	5.00	0.0000
Utility Infrastructure	4.80	5.00	5.00	0.4104
Transportation Infrastructure	4.60	5.00	5.00	0.5982
Availability of Quality Workforce	4.55	5.00	5.00	0.5104
Availability of Jobs	4.30	4.00	4.00	0.5712
Availability of Housing	4.25	4.00	4.00	0.7164
Committed Leadership	4.25	4.00	4.00	0.7164
Availability of Funding	4.25	4.00	4.00	0.5501
Communication Infrastructure	4.25	4.00	4.00	0.7164
Ability to sustain a project after it is completed	4.10	4.00	4.00	0.8522
Public Education	4.00	4.00	4.00	0.6489
Healthcare	4.00	4.00	4.00	0.7255
Safety	3.90	4.00	4.00	0.7182

3. Was there a difference in the responses from Delphi survey Round 2 and Round 3 in the predominant elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?

As the intent of the study was to develop consensus, an attempt was made to examine the difference between the initial responses of survey participants in Round 2 to their responses in Round 3 after they had the opportunity to examine how the other participants responded to the survey. Additionally, in search of agreement, only those items from the list of elements with a mean of 4.0 or higher were included in the Round 3, a practice that has been utilized in other Delphi studies (Miles 1997). Of the 41 elements rated by the experts in Round 2, a total of 13 had a mean score of 4.0 or higher. Participants made a total of 86 changes in their ratings of the 13 elements from Round 2 to Round 3 for an average change of 4.3 scores by each expert. Four of the experts left all of their scores identical in Round 3 to their initial Round 2 scores.

The element with the largest change in the level of consensus from the group between the Rounds 2 and 3 surveys was Committed Leadership with an increase of 0.25 in the mean score. There were no changes in the mean score between the Round 2 and 3 surveys for Availability of Water, Transportation Infrastructure, Availability of Funding, Project Sustainability, Public Education and Healthcare, which indicates that there was no change in the level of consensus of the group for these elements.

Table 3

Comparison of Mean Scores from Round 2 and Round 3 for the 13 Elements with the Highest Level of Agreement in Round 2

Element of Community Development	Round 2 Mean	Round 2 SD	Round 3 Mean	Round 3 SD	Difference in Round 2 & 3 Mean
Availability of Water	5.00	0.0000	5.00	0.0000	0.00
Utility Infrastructure	4.75	0.4443	4.80	0.4104	0.05
Transportation Infrastructure	4.60	0.5026	4.60	0.5982	0.00
Availability of Quality Workforce	4.50	0.6882	4.55	0.5104	0.05
Availability of Jobs	4.20	0.8335	4.30	0.5712	0.10
Availability of Housing	4.35	0.6708	4.25	0.7164	-0.10
Committed Leadership	4.00	0.8584	4.25	0.7164	0.25
Availability of Funding	4.25	0.7164	4.25	0.5501	0.00
Communication Infrastructure	4.40	0.6806	4.25	0.7164	-0.15
Ability to sustain a project after it is completed	4.10	0.9119	4.10	0.8522	0.00

(table continues)

Table 3
Comparison of Mean Scores from Round 2 and Round 3 for the 13 Elements with the Highest Level of Agreement in Round 2 (Cont.)

Element of Community Development	Round 2 Mean	Round 2 SD	Round 3 Mean	Round 3 SD	Difference in Round 2 & 3 Mean
Public Education	4.00	0.7947	4.00	0.6489	0.00
Healthcare	4.00	0.8584	4.00	0.7255	0.00
Safety	4.00	0.9177	3.90	0.7182	-0.10

4. Was there a significant difference in the elements Western Oklahoma community leaders perceive to be necessary for effective in rural community development in their region, based on which regional Council of Government (COG) the expert in affiliated with?

Scoring was compared based on COG membership. Participants represented one of 4 COGs: SWODA (n=5), ASCOG (n=5), OEDA (n=5), and NODA (n=5). Members from all four COGs strongly agreed with the availability of water being an essential element to rural community development in Western Oklahoma with every participant rate the element with a score of 5.0. Members from the SWODA service area also strongly agreed that the utility infrastructure other than water (i.e., sewer, gas, electric, trash, storm drainage, etc.) (mean 5.0), transportation infrastructure (i.e. road, bridges, highways, etc.) (mean 5.0), and communication infrastructure (i.e.broadband, high-speed internet, cell service, technology, etc.) (mean 4.6), were essential. Those participants from the ASCOG service area, in addition to the availability of

water (mean 5.0), also highly agreed that utility infrastructure (mean 4.8) and transportation infrastructure (mean 4.6) were essential, but in addition indicated that they highly agreed that the availability of quality workforce was also an essential element (mean 4.8). Experts from the OEDA COG highly agreed with the availability of water (mean 5.0), however there is a slight gap in the level of agreement to the next elements: utility infrastructure (mean 4.4) and availability of workforce (mean 4.4). Finally the members from the NODA district had high levels of agreement with the availability of water (mean 5.0), utility infrastructure (mean 5.0), ability to sustain a project after it is completed (i.e. maintenance, employees, advertising, etc.) (mean 4.8), availability of quality workforce (mean 4.6), transportation infrastructure (mean 4.6), availability of jobs (mean 4.6), availability of funding (mean 4.6), and healthcare (mean 4.6). Comparisons are displayed in Table 4. The data collected was ordered-categorical data, therefore a series of ANOVA procedures was conducted to determine if there was a variation in the scores for the 4 COG sub-groups. (Berman, 2007). With an alpha level of 0.05, no significant difference was found between the responses received from the members of the 4 COGs for the top 13 items. Therefore the answer to the research question is that a significant difference did not exist in the elements necessary for successful community development based what COG the expert was a member of in Western Oklahoma. Specific ANOVA results can be reviewed in Tables 4-19 (see Appendix J). This finding strengthened the argument of consensus among the experts as to the importance of these elements to successful community development in rural Western Oklahoma.

Table 4

Development in Rural Western Oklahoma by Council of Government Comparison of Mean Scores of Responses to Elements Necessary for Successful Community

Element of Community Development	SWODA Mean *SD*	ASCOG Mean *SD*	OEDA Mean *SD*	NODA Mean *SD*	OVERALL Mean *SD* (p-value)
Availability of Water	5.00 *0.0000*	5.00 *0.0000*	5.00 *0.0000*	5.00 *0.0000*	5.00 *0.0000* (no variance)
Utility Infrastructure	5.00 *0.0000*	4.80 *0.4472*	4.40 *0.5477*	5.00 *0.0000*	4.80 *0.4104* (0.0517)
Transportation Infrastructure	5.00 *0.0000*	4.60 *0.5477*	4.20 *0.8367*	4.60 *0.5477*	4.60 *0.5982* (0.5683)
Availability of Quality Workforce	4.40 *0.5477*	4.80 *0.4472*	4.40 *0.5477*	4.60 *0.5477*	4.55 *0.5104* (0.39091)
Availability of Jobs	4.40 *0.5477*	4.40 *0.5477*	3.80 *0.4472*	4.60 *0.5477*	4.30 *0.5712* (0.08759)

(table continues)

Table 4

Development in Rural Western Oklahoma by Council of Government Comparison of Mean Scores of Responses to Elements Necessary for Successful Community (Cont.)

Element of Community Development	SWODA Mean SD	ASCOG Mean SD	OEDA Mean SD	NODA Mean SD	OVERALL Mean SD (p-value)
Availability of Housing	4.40	4.00	4.20	4.40	4.25
	0.5477	*1.0000*	*0.8367*	*0.5477*	*0.7164*
					(0.81161)
Committed Leadership	4.40	4.20	4.00	4.40	4.25
	0.5477	*1.0954*	*0.7071*	*0.5477*	*0.7164*
					(0.81161)
Availability of Funding	4.20	4.20	4.00	4.60	4.25
	0.4472	*0.8367*	*0.0000*	*0.5477*	*0.5501*
					(0.35325)
Communication Infrastructure	4.60	4.40	3.80	4.20	4.25
	0.5477	*0.8944*	*0.8367*	*0.4472*	*0.7164*
					(0.35325)
Ability to sustain a project after it is completed	3.60	4.20	3.80	4.80	4.10
	0.5477	*0.8367*	*1.0954*	*0.4472*	*0.8522*
					(0.11269)
Public Education	3.80	4.00	4.00	4.20	4.00
	0.4472	*1.0000*	*0.0000*	*0.8367*	*0.6489*
					(0.83854)
Healthcare	3.80	3.80	3.80	4.60	4.00
	0.4472	*0.8367*	*0.8367*	*0.5477*	*0.7255*
					(0.21037)

(table continues)

Table 4

Development in Rural Western Oklahoma by Council of Government Comparison of Mean Scores of Responses to Elements Necessary for Successful Community (Cont.)

Element of Community Development	SWODA Mean SD	ASCOG Mean SD	OEDA Mean SD	NODA Mean SD	OVERALL Mean SD (p-value)
Safety	3.80	3.80	3.80	4.20	3.90
	0.4472	*1.3038*	*0.4472*	*0.4472*	*0.7182*
					(0.79121)

5. Where did Western Oklahoma community leaders place elements related to Higher Education within the overall list of elements perceived to be necessary for effective rural community development in their region?

Rural community development experts did not directly identify higher education as a necessary component for successful community development in this study. Though some could argue that higher education could be included in the element of Public Education (mean 4.0), typically this term is reserved for referring to common education. The element that would be most closely related to higher education would be Availability of Quality Workforce (mean 4.5) as colleges and universities are some of the entities charged with preparing individuals for the workforce. This element had one of the highest levels of consensus among the experts in this study, with only elements involving basic natural resources and infrastructure rating higher: Availability of Water (mean 5.0), Utility Infrastructure (mean 4.8) & Transportation Infrastructure (mean 4.6).

And while not directly listed by the respondents, higher education could be involved virtually any of the elements discussed. For example rural communities could work with faculty or students in environmental policy in developing policy proposals in an attempt to either gain access to additional water sources or protect water interests. Centers for Rural Development are often located on college and university campuses and assist rural communities in identifying funding opportunities for capital projects and community programs. Higher education assists in public education, healthcare and safety by not only training and certifying the workforce, but also through extensive research in both fields. Childcare in the community could be enhanced by an on-campus daycare that could in turn be used as clinical teaching experience for early childhood education students. To help increase the pipeline of young community leaders, the institution could host and facilitate a young professionals' organization or a community leadership class. To increase community support and involvement, town hall meetings could be hosted and facilitated on campus. One of the most common contributions that was found in the list of elements is providing places for everyone to meet. Universities have a variety of facilities that can be opened up for the community to utilize including, libraries, fitness facilities, dining options, meeting space and performance venues.

So while community leaders did not specifically identify higher education, their focus was centered on core infrastructure and basic community needs that higher education cannot be separated from.

6. What were the implications of the community development elements identified by Western Oklahoma community leaders on state and federal policy formation and implementation?

Utilizing the Community Capitals Framework, the majority of those elements that garnered high consensus from the participants would fall under the categories of built or human capital. In addition to higher education not being directly mentioned by participants, of the elements involving social capital, (Community Involvement/ Support, mean 3.75; Community Drive to Make Things Happen, mean 3.65; Quality of Life Activities, mean 3.60; Spirit of Openness and Communication, mean 3.45; Shared Community Vision, mean 3.40; Places for Everyone to Meet, 3.15; Senior Programs/Center, mean, 3.15; and Youth Centers, mean 3.15) none reached a level of high consensus among the participants.

While the community development leaders participating in this study did not reach high levels of consensus on social capital elements, there still remain opportunities for higher education institutions to become partners in elements like communications infrastructure, which can not only develop an element of built capital, but through partnerships, develop social capital as well. A rural university, seeing the value of having 4G wireless communication service to both the university and community, could partner with the community and private industry to advocate for policies allowing expanded access to a rural area, again building both built and social capital. As Uphoff (1992) recognized, "paradoxically though it may seem, "top-down" efforts are usually needed to introduce, sustain, and institutionalize "bottom-up" development," (1992, p.273). While higher education may or may not be viewed at the "top", these types of opportunities allow for higher education institutions to fulfill the role of "social engine" (Miller & Kissinger, 2007, p. 27) "catalyst" (Fluharty & Scaggs, 2007, p. 19) and partner in development in rural communities. Where urban communities may have many entities to fill this important role, rural communities may be more limited in their options.

However, with increased attention on accountability and degree completion, money being

spent by institutions of higher education on the development of the communities they serve may come under scrutiny from legislators lobbied each year for increased funding for higher education and from parents and students paying college tuition and fees each semester. In order for higher education institutions to take on the responsibility of leading out in community it would be important for stakeholders such as legislators, governing boards, parents, students and community development leaders to recognize this as a significant role for the rural institution.

It is going to be critical for institutions to be able to communicate the effectiveness and benefit of their involvement in those efforts to its many stakeholders. Based on the findings of this study, work must be done before, at least in the purposes of this study, the university is viewed as a critical element in successful community development. Current development efforts may need to be realigned with those elements where respondents found high levels of consensus. Or a campaign to highlight the importance of the institution's efforts may be necessary. Additional assessment efforts may need to occur in order to determine if specific community development efforts of the university are not effective or if it is simply a lack of awareness indicating a need for the institution to better promote the efforts they are already involved in. Universities must take a proactive approach in order to protect vulnerable resources that have been dedicated to supporting and investing in rural community development.

Of all of the elements listed by rural community development leaders in this study, those five with the highest levels of agreement could be grouped in to two categories: basic infrastructure (water, utilities, road and bridges) and economic/workforce development (jobs & quality workforce). As small rural communities, the capability to fund projects involving these categories on their own would be extremely challenging. State and federal grants along with public and private partnerships have become essential to rural communities who want to replace

or expand existing infrastructure or expand their efforts to bring jobs or train their workforce. The elements identified in these two categories are the foundation for the majority of the remaining elements identified by the experts in this study, however many of the other elements are also tightly intertwined. Quality jobs cannot be attracted without being able to offer adequate housing or healthcare. Quality workforce requires quality education. As rural communities face these challenges and as state and federal legislators and agencies look for ways to provide assistance, there are opportunities for higher education institutions to become partners in overcoming some of these barriers to reaching successful community development.

Current circumstances in Western Oklahoma may also be pulling the attention of community development experts off of elements that might involve higher education onto critical needs. Over the past three years, the Western half of the state has experienced drought-like conditions, where entire lakes typically used as municipal water sources have disappeared. This found many communities on mandatory water rationing leaving city leaders scrambling to negotiate new water sources. These circumstances could contribute to the element of Availability of Water topping the list of elements necessary for successful community development in this study. An influx of workers attracted to the higher pay scale of the oil and gas industry has also created critical shortages in housing and gaps in the available workforce to fill jobs that only pay minimum wage. Elements related to quality workforce and housing also found great consensus among community development leaders.

As Fluharty and Scaggs (2007) noted, there is still a major discrepancy between rural and urban communities in the amount of federal monies earmarked for community development. While the majority of rural support is dedicated to farm subsidies, Atkinson (2004) called for investment in infrastructure, developing a skilled workforce and enhancing quality of life to

create a more sustainable rural economy. Those elements listed by Atkinson were also reflected in the list experts in this study identified as elements essential to successful rural community development. In order to enhance the attention of the support needed for rural community development, Atkinson (2004) also suggested the idea of a state match for dedicated federal funds. The elements identified as having high levels of consensus could be utilized to prioritize this dual level support.

Based on the elements identified in this study the priority should be placed on finding ways to secure and regulate water usage in rural communities. Currently there are many public issues facing Western Oklahoma in regards to water including: battles over water rights, differences in community rationing programs, trucking or developing pipelines for water to go out of state, the amount of water being utilized by the oil and gas industry, or the amount of water be utilized by the agricultural industry. As lakes and aquifers are bring depleted, it will be critical for state and federal policy development in this area.

Aging rural infrastructure including utilities, roads and bridges are needing major enhancements. Even fiber optic cable utilized for broadband for the past few decades is outdated with a need now to expand communications on a wireless platform to stay current with ever-changing opportunities in emerging technology. While many rural projects were funded through the American Recovery and Reinvestment Act of 2009, there is still a great need for infrastructure updates in rural communities. As was also identified in this study there is a great need for funding dedicated supporting major projects like those completed with stimulus dollars for expenses that occur after the project itself is completed. The cost of necessary maintenance and upkeep of projects can be more than rural communities are able to handle with their own annual revenues. Policy could be reviewed to earmark a portion of federal grant funding to assist

rural communities with the upkeep of these enhancements.

Many state and federal programs are dedicated to trying to increase the number of jobs and increase the skill levels of the available workforce. Since these two elements rated within the top five elements receiving the highest levels of consensus in this study, these are still major concerns for rural community leaders. Further investigation in to the specific needs in these area could help to shape the policies and programs as they pertain to rural communities.

These critical issues may be preventing community development leaders from being able to focus on anything else, making it even more important for institutions of higher education to step forward to assist as partners in finding solutions to these issues facing their rural communities.

Chapter Summary

The current chapter provided a summary of the elements necessary for effective rural community development. Nominations were sought from executive directors of rural councils of government to identify 20 rural community development experts. These experts completed all three rounds of the Delphi survey technique. The experts found high levels of agreement that Availability of Water, Utility Infrastructure, Transportation Infrastructure, Availability of Quality Workforce and Availability of Jobs were all necessary elements necessary for effective community development. No significant differences were found between the Round 2 and Round 3 survey responses, and no differences were found in the level of agreement based on the COG the community development expert was a member of. Higher education was not directly identified by the experts as an element necessary for effective community development, however the Availability of a Quality Workforce found high agreement among experts. With the categories identified as having the highest level of agreement among experts, there are

opportunities for higher education institutions to partner with rural communities to assist with some of the challenges they are facing in providing these elements they consider essential for community development.

Chapter V

Conclusions and Recommendations

Introduction

Higher education continues to develop its role as a partner in community development. As this role expands, and as stakeholders have demanded greater accountability, institutions of higher education must be able to provide justification for the resources they dedicate to this area. Institutions located in rural communities may find that they play larger roles in their community's development efforts as there may be a lack of other major entities to drive and support them.

This study was designed to assist in the identification of the elements necessary for successful rural community development and to identify the role or potential roles higher education institutions could play in these endeavors. A list of elements was developed and rated by community development experts from across Western Oklahoma. The study was intended to assist rural higher education institutions in prioritizing their resources as they look to participate in community development efforts. Each expert surveyed was a member of one of four regional Councils of Government. This study also looked to see if differences existed in the importance of the elements identified based on the different COGs. This study also discussed the implications the findings have on state and federal policy.

The current chapter has been divided into four sections: Summary of the Study, Conclusions, Recommendations, and a Chapter Summary.

Summary of the Study

Before an institution of higher education can assess the effectiveness of their involvement in community development, administrators must be able to determine the essential elements of an effective program. The purpose of the current study was to identify and gain consensus as to the essential elements necessary for successful rural community development.

The significance of the study was based on the ever-growing interest in the accountability of resources and a need for colleges and universities to be able to substantiate their investment in community development efforts. Without methods for assessing current development efforts, higher education institutions are unable to fully know if they are meeting the needs of their community.

In an effort to reach group consensus, a quasi-qualitative research method, the Delphi-technique, was selected. This method allows participants from a wide geographical area to participate without having everyone gathered in one location. It also allows participants to have an equal voice and the opportunity to reflect on their answers.

Executive directors from the four rural community Councils of Government located in Western Oklahoma were contacted and asked to nominate five community development experts from their service area. The desired sample of 20 participants was identified and asked to participate in the Delphi's three-step survey. All 20 participants completed all three rounds of the surveys. In the first survey, the experts identified 41 elements they believed to be essential to successful rural community development in Western Oklahoma. These elements were then rated by the same experts on a 1-to-5 Likert-type scale in the second round of surveys. Any element with a mean score below 4.0 was eliminated. In the third survey round, the remaining 13 elements were sent back out to the expert participants along with the collective mean, median

and mode score and the score they individually gave each element in the previous survey. Participants were then given the opportunity to rescore each item.

The data collected was used to answer the following research questions.

1. What did Western Oklahoma community leaders perceive to be the necessary elements for successful rural community development in their region?

In the first survey round of the Dephi technique utilized in this study, community development experts in rural Western Oklahoma submitted elements they perceived to be necessary to successful rural community development. A list of 41 unduplicated answers was then derived from the submissions. The experts were then asked through the round 2 survey to rate the items on a 1-to-5 Likert-type scale. The mean, median and mode were calculated for each element on the list which are displayed in Table 1 (see Appendix J).

2. To what extent was there consensus on the elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?

After the elements were rated in the Round 2 survey, 13 items received a mean score of 4.0 or higher indicating a high or very high level of agreement. Items with a mean score lower than 4.0 were eliminated from the Round 3 survey. In Round 3 experts were the given the group mean, median and mode along with their own individual score for each element they assigned in the Round 2 survey and asked to score the elements once more using the 1-5 Likert-type scale. The four elements that received a mean score greater than 4.50, indicating a very high level of agreement, included: Availability of Water, Utilities Infrastructure other than water (i.e. sewer, gas, electric, trash, storm drainage), Transportation Infrastructure (i.e. roads, bridges, highways) and Availability of Quality Workforce (See Table 2).

3. Was there a difference from Delphi survey Round 2 and Round 3 in the predominant elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region?

The experts made a total of 86 changes in their ratings of the 13 elements from Round 2 to Round 3 for an average change of 4.3 scores by each expert. The element with the largest change in the level of consensus from the group between the Rounds 2 and 3 survey was Committed Leadership with an increase of 0.25 in the mean score (See Table 3). No changes were seen in the mean score between the Round 2 and 3 surveys for Availability of Water, Transportation Infrastructure, Availability of Funding, Project Sustainability, Public Education and Healthcare. The fact that there was no change in the level of agreement between Round 2 and 3 further supported the idea that there was consensus of the group for these elements.

4. Was there a significant difference in the elements Western Oklahoma community leaders perceive to be necessary for effective rural community development in their region, based on which regional Council of Government (COG) the expert is affiliated with?

Scoring was compared based on the COG membership of the participants (See Table 4). Members from all four COGs strongly agreed with the availability of water being an essential element to rural community development in Western Oklahoma with every participant rating the element with a score of 5.0. Since the data collected was ordered-categorical data, a series of ANOVA procedures was conducted to determine if there was a variation in the scores received from members of the 4 COGs (Berman, 2007). No significant difference was found.

5. Where did Western Oklahoma community leaders place elements related to Higher Education within the overall list of elements perceived to be necessary for effective rural community development in their region?

Higher education was not specifically listed by the community development experts participating in this study. However higher education is involved in some capacity in all of the 13 elements receiving high levels of consensus. So while it was not listed directly, higher education cannot be separated from the elements that were perceived to be necessary for successful community development. There are also many opportunities for higher education to become more involved in these priority areas of rural community development.

The lack of higher education being identified by the community experts could have been influences by the education level or lack of education level of the expert participants. Participants were not asked their educational level in this study. There may also be a disconnect among participants as to how higher education is defined. This is an area that could be refined in future studies.

6. What were the implications of the community development elements identified by Western Oklahoma community leaders on state and federal policy formation and implementation?

The results of the study indicated that elements that gained the greatest level of consensus were focused on basic elements of infrastructure and jobs/workforce development. Rural communities are facing challenges in these areas that are dominating the focus and resources. There is a need for more equitable state and federal resources to be dedicated to rural community development. Not until some of the basic needs are met can communities begin to spend time and resources developing projects to enhance quality of life thereby creating a more sustainable

rural economy (Atkinson, 2004). There is also the opportunity for the university to utilize its many resources to partner in rural community development efforts.

Conclusions

1. Community development leaders identified a wide variety of elements they considered essential to rural community development in Western Oklahoma. Once the duplicates were removed, a total of 41 elements were identified by rural community development experts as necessary for successful rural community development.

2. A high level of consensus was reached by experts on 12 elements of rural community development. After having the opportunity to see both the group scoring and their individual scoring, little difference was seen between the Round 2 and Round 3 surveys in the mean scores for these elements. Four elements received an agreement mean score greater than 4.50, indicating a very high level of agreement, including: Availability of Water, Utilities Infrastructure other than water (i.e. sewer, gas, electric, trash, storm drainage), Transportation Infrastructure (i.e. roads, bridges, highways), and Availability of Quality Workforce.

3. Utilizing the Community Capitals Framework, the majority of those elements that received high consensus from the experts would fall under the categories of built or human capital. Of all of the elements listed by rural community development leaders in this study, those five with the highest levels of agreement could be grouped in to two categories: basic infrastructure (water, utilities, roads and bridges) and economic/workforce development (jobs & quality workforce).

4. There was no significant difference in scoring found between the four COGs as to the level of agreement on those 12 elements that received the highest mean scores. The ANOVA statistical method was used to determine that there was no significant difference in the scores,

reaffirming that there were high levels of consensus that these elements were essential to successful rural community development.

5. Higher education is not at the forefront of expert's minds as an essential element of rural community development. It was evident when higher education was not listed among the 41 initial answers, that higher education was not one of the first elements community development experts considered necessary for successful rural community development. However, higher education is embedded in many of the elements that were submitted.

6. State and federal policymakers should currently be focused on assisting rural communities with those high priority elements identified by experts in this study. Based on the findings of this study, the main areas community development leaders identified as essential to successful rural community development were focused on basic infrastructure need and economic/workforce development. While the majority of federal community development dollars are dedicated to farm subsidies, federal policymakers should re-evaluate to see if reinvesting in the areas identified in this study could provide a more sustainable future for rural communities.

7. There are many opportunities for Institutions of Higher Education to partner with rural communities to help support the elements identified in this study as essential to effective rural community development in Western Oklahoma. Higher education institutions could utilize the findings to create assessments for their current community development efforts or to guide the planning and allocation of funding for future community development projects.

Recommendations

Recommendations for Research

1. A similar study is encouraged that refines the research questions to ask what

opportunities the community development experts see for higher education to be involved in rural community development. This would have the potential to identify potential partnerships for higher education.

2. A comparison study should be undertaken to compare the essential elements perceived by higher education administrators to be essential to rural community development with those elements identified by community development experts.

3. A similar study should be completed in an area with a different rural composition of economy to highlight similarities and differences.

4. A comparison study should be completed using a suburban or urban community in order to analyze similarities and differences.

5. Qualitative analysis should be conducted to develop greater understanding of which of the elements that were considered to be essential are currently available and in which areas and which elements rural communities were still struggling with. The current study helped to determine essential elements, but a qualitative study could better establish current needs in these communities.

6. Future research should allow for the geographic expansion of the study. Utilizing experts from rural communities across the country could bring in additional elements for consideration or could further substantiate the elements where the experts in the current study found consensus.

Recommendations for Practice

1. Findings of the study should be shared with higher education administrators,

specifically those located in rural areas. These findings may prove helpful in both assessing an institution's current involvement in community development efforts or in making decisions about how the institution should allocate future resources.

2. Findings should also be shared with higher education administrators to bring attention to the lack of recognition higher education found in the list of essential elements participants submitted. Institutions that are actively involved in community development may want to consider ways to showcase their efforts to the public, legislators, regents, parents and students in an effort to raise awareness. It is going to be critical for these entities to believe that the investment of the institution's time, talent and money in community development is valuable in order for it to be allowed to continue.

3. The list of those items that received high levels of consensus should be shared with federal and state policymakers. Investment in agriculture can no longer be the primary way rural communities are supported. Additional ways to support rural communities with essential infrastructure and programs need to be developed. Policymakers can begin by creating quality job opportunities and a quality workforce in order for rural America to continue sustainable growth.

4. And finally, findings should be shared with community leaders. Through the development of the list of priority items, consensus was found from community development leaders from across the Western half of Oklahoma. If they could see that together they have agreement on many issues facing their individual communities, they could come together with a collective voice and have the potential to have greater influence with policymakers.

Discussion

The purpose of the study was to identify the elements necessary for successful rural community development. While consensus was gained by experts on 12 elements, the Delphi process is largely exploratory, so generalizations cannot be made. The participants were also limited to community development experts in Western Oklahoma experiencing an unprecedented influx in oil and gas production does not allow generalizations to be made with the results from this study. Despite these limitations, the Community Capitals Framework (Flora & Flora 2008) was utilized and it was determined that those elements where consensus was gained were primarily in the areas of build and human capital. Priority areas were determined that included elements of basic infrastructure and economic/workforce development. Those elements considered to fall within the guidelines of social capital were not prominent on the list of essential elements identified by the expert participants, even though Atkinson (2004) listed them as essential to a sustainable rural economy. Additional policies are necessary to enhance the support of rural communities in these efforts.

As Lu (2011) found with the dairy farmers of Western Kansas, beneficial results can occur when small rural communities with common issues and interest join forces to take their agenda to policy makers. With the consensus found through this study, there are opportunities for rural Western Oklahoma communities to do the same. Gaining additional attention and assistance in the primary areas of infrastructure and economic/workforce development could allow the communities to shift more attention to elements of social capital that Atkinson (2004) identified as also playing an important role in his formula for a sustainable rural economy.

The data indicates there are opportunities for assistance with the primary areas of built and human capital that seem to be on the forefront of the minds of participants as well as

opportunities for expansion in areas of social capital. Higher education has many of the resources for becoming a community partner in these areas. This additional investment in rural communities, coupled with efforts to raise awareness to those contributions the institutions already make to rural community development, could enhance the perception of higher education as an essential element of rural community development.

Chapter Summary

This chapter intended to summarize the current study and present a summary of the answers to each of the research questions. Also included in the chapter were a list of conclusions which were drawn from the data collected for each research question. Recommendations for both further research and practice were also presented. Both sets of recommendations were guided by established research and the findings of the current study.

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Appendices

Appendix A: E-mail to COG Executive Directors Requesting Nomination of Participants

Dear_____:

My name is Anita Thompson and I am currently a doctoral candidate in Public Policy with a concentration in Higher Education at the University of Arkansas. I am originally from Western Oklahoma and have a background in higher education and community development.

My dissertation is centered on community development in rural Western Oklahoma and is specifically looking at the elements necessary for successful community development in rural locations. Using the Delphi research method, I will be utilizing those active in rural community development in Western Oklahoma as the experts required in this type of exploratory research.

I am requesting that you nominate 5 members of your COG that are active in community development that you believe would be beneficial for me to include in this three-round study. Please provide the name, employer, hometown, email and phone of the five member s you are nominating.

The process should not be an extremely time-consuming process. Only 20 community development leaders will be nominated so your participation is critical to the success of this study.

Please send the names and contact information requested to me by May 6th. Your participation is greatly appreciated, should you have any questions, please contact me at [redacted] or my advisor, Dr. Michael Miller at [redacted]. Thank you for your willingness to participate and for your help in my dissertation research.

Sincerely,

Anita (Hylton) Thompson
Doctoral Candidate

Appendix B: IRB Approval

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

April 22, 2014

MEMORANDUM

TO:	Anita Thompson Michael Miller
FROM:	Ro Windwalker IRB Coordinator
RE:	New Protocol Approval
IRB Protocol #:	14-04-681
Protocol Title:	*The Role of Higher Education in Rural Community Development in Western Oklahoma*
Review Type:	☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 04/22/2014 Expiration Date: 04/21/2015

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (http://vpred.uark.edu/210.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 20 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

210 Administration Building • 1 University of Arkansas • Fayetteville, AR 72701
Voice (479) 575-2208 • Fax (479) 575-3846 • Email irb@uark.edu

Appendix C: Introductory E-mail

Dear _____:

My name is Anita Thompson and I am currently a doctoral candidate in Public Policy at the University of Arkansas. I am originally from Western Oklahoma and have a background in higher education and community development.

My dissertation is centered on community development in rural Western Oklahoma and is specifically looking at the elements necessary for successful community development in rural locations. Using a modified Delphi research method, I will be utilizing those active in rural community development in Western Oklahoma as the experts required in this type of exploratory research.

You have been nominated by a peer as an expert in community development in Western Oklahoma. Your participation is requested throughout this three-round Delphi process. In the first round, you are asked to list five elements you believe to be necessary for effective community development in rural Western Oklahoma. During the following two rounds you will be asked to rate the importance of the elements submitted by all of those participating in this study.

Only 20 community development leaders have been selected to participate and your participation is critical to the success of this study. The data will be reported collectively, so other participants will not be able to identify which answers are yours. Your individual responses will be kept confidential to the extent allowed by law and University policy. Your participation in this study is voluntary, and you retain the right to withdraw at any time. I have included an anticipated schedule of each round and have attached the survey for the Round 1. Completion of Round 1 should only take 5-10 minutes of your time.

Please complete the attached survey and email your answers back to me by May 13. Your participation is greatly appreciated. Should you have any questions, please contact me at [redacted] or my advisor, Dr. Michael Miller at [redacted]. For questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University IRB Coordinator, at (479) 575-2208 or by email at irb@uark.edu. Thank you for your willingness to participate and for your help in my dissertation research.

Sincerely,

Anita (Hylton) Thompson
Doctoral Candidate

Appendix D: Anticipated Schedule of Study

April 29: Email to executive COG executive directors

May 6: Responses with participant recommendations due

May 6: Introductory email and Round 1 Survey to go out

May 13: Round 1 Survey Due

May 28: Round 2 Survey to go out

June 4: Round 2 Survey Due

June 10: Round 3 Survey to go out

June 17: Round 3 Survey Due

Appendix E: Round 1 Survey

Name:_____

Title:_____

Phone #: _____

Mailing Address:_____

The purpose of this study is to identify the elements necessary for effective community development in rural Western Oklahoma. Please identify five elements you feel are necessary for successful community development in rural Western Oklahoma.

1._____

2._____

3._____

4._____

5._____

Your participation in this study is entirely voluntary, and you retain the right to withdraw at any time. Only collective group data will be reported and your individual responses will be kept confidential to the extent allowed by law and University policy.

Please return your answers by May 13, 2014 to [redacted] or by faxing it to [redacted]. Thank you for your participation! If you have any questions please feel free to contact me.

Appendix F: Round 2 E-mail

Dear _____:

Thank you for your prompt response to the Round 1 Survey identifying the elements you believe to be necessary for effective community development in rural Western Oklahoma.

Attached to this email you will find the Round 2 Survey which includes the unduplicated responses from all 20 participants. You are asked to rate each statement on a 1-to-5 Likert-type scale based on the extent you believe the element listed is necessary to effective community development in rural Western Oklahoma.

Please take a few moments to review and rate the statements listed and return your answers to me by June 4, 2014. Should you have any questions, please contact me at [redacted] or my advisor, Dr. Michael Miller at [redacted]. For questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University IRB Coordinator, at (479) 575-2208 or by email at irb@uark.edu. Thank you again for your continued cooperation. .

Sincerely,

Anita (Hylton) Thompson

Doctoral Candidate

Appendix G: Round 2 Survey

The elements listed below represent potential elements necessary for effective community development. The purpose of this round is to determine your level of agreement. Please rate each element on a 1-to-5 Likert-type scale based on the extent you believe the element listed is necessary to effective community development in rural Western Oklahoma.

1= No Agreement

2= Little Agreement

3=Medium Agreement

4= High Agreement

5= Very High Agreement

Please be selective as you review the statements. Although many elements may be necessary, try to distinguish higher and lower priorities with your scoring.

To what extent do you believe the following elements are necessary to effective community development in rural Western Oklahoma:

	No Agree-ment	Little Agree-ment	Medium Agree-ment	High Agree-ment	Very High Agree-ment
Availability of Water	1 _____	2 _____	3 _____	4 _____	5 _____
Utility Infrastructure other than water (i.e. sewer, gas, electric, trash, storm drainage)	1 _____	2 _____	3 _____	4 _____	5 _____
Transportation Infrastructure(i.e. Roads, Bridges, Highways)	1 _____	2 _____	3 _____	4 _____	5 _____

Communication Infrastructure (i.e. broadband, high-speed internet, cell service, technology)	1	_____	2	_____	3	_____	4	_____	5	_____
Availability of Quality Workforce	1	_____	2	_____	3	_____	4	_____	5	_____
Availability of Housing	1	_____	2	_____	3	_____	4	_____	5	_____
Committed Leadership	1	_____	2	_____	3	_____	4	_____	5	_____
Master Plan/Strategic Planning	1	_____	2	_____	3	_____	4	_____	5	_____
Availability of Funding	1	_____	2	_____	3	_____	4	_____	5	_____
Spirit of Communication, Cooperation and Openness	1	_____	2	_____	3	_____	4	_____	5	_____
Community drive to make things happen	1	_____	2	_____	3	_____	4	_____	5	_____
Awareness/Expansion of e-Commerce	1	_____	2	_____	3	_____	4	_____	5	_____
Public Education	1	_____	2	_____	3	_____	4	_____	5	_____
Infrastructure improvements specific to industrial Expansion	1	_____	2	_____	3	_____	4	_____	5	_____
Methods to attract business and industry	1	_____	2	_____	3	_____	4	_____	5	_____

Availability of Land/Land Development	1	_____	2	_____	3	_____	4	_____	5	_____
Availability of quality job training programs	1	_____	2	_____	3	_____	4	_____	5	_____
Sense of regionalism	1	_____	2	_____	3	_____	4	_____	5	_____
Reduction of permanent intellectual attrition	1	_____	2	_____	3	_____	4	_____	5	_____
Quality of life activities/amenities (i.e. fairs, cultural events, art shows, parades)	1	_____	2	_____	3	_____	4	_____	5	_____
Availability of informational resources to support community development (i.e. how to apply for funding, how to develop a strategic plan	1	_____	2	_____	3	_____	4	_____	5	_____
Healthcare	1	_____	2	_____	3	_____	4	_____	5	_____
Senior Citizen Centers/ Programs	1	_____	2	_____	3	_____	4	_____	5	_____
Youth Centers	1	_____	2	_____	3	_____	4	_____	5	_____
High Quality Affordable Child care	1	_____	2	_____	3	_____	4	_____	5	_____
Pipeline of younger community leaders	1	_____	2	_____	3	_____	4	_____	5	_____

Availability of Jobs	1		2		3		4		5	
Shared Community Vision	1		2		3		4		5	
Good relationships with state/national leaders	1		2		3		4		5	
Advertising of area amenities	1		2		3		4		5	
Safety (police, sheriff, fire, etc.)	1		2		3		4		5	
Service mapping, asset mapping, gap analysis	1		2		3		4		5	
Places for everyone to meet, parks, community centers, entertainment facilities	1		2		3		4		5	
Less EPA control	1		2		3		4		5	
Federal government out of State business	1		2		3		4		5	
Get rid of Obamacare	1		2		3		4		5	
Increase Wind Power	1		2		3		4		5	
Increase drilling activity/ start pipeline	1		2		3		4		5	
Community involvement/support	1		2		3		4		5	
Fire protection due to draught	1		2		3		4		5	

Ability to sustain a project after it is completed (i.e. maintenance, employees, advertising, etc.)	1 _____	2 _____	3 _____	4 _____	5 _____

Please return by June 4, 2014 to [redacted] or by faxing it to [redacted].

Thank you for your participation!

If you have any questions please feel free to contact me.

Appendix H: Round 3 E-mail

Dear _____:

Thank you for your prompt response to the Round 2 Survey rating the potential elements necessary for effective community development in rural Western Oklahoma.

Attached to this email you will find the Round 3 Survey which includes a list of those responses where there was the highest combined level of consensus from all participants. These responses receive a 4.0 or above average rating on the 5 point scale participants were asked to use to rate their level of agreement. The mean, median, mode and standard deviation for each of these elements is also included. You will also find your individual ratings for these elements included.

The purpose of this round is to give you an opportunity to reevaluate your previous responses. After review the results from the Round 2 survey, you are asked to again rate each statement on a 1-to-5 Likert-type scale based on the extent you believe the element listed is necessary to effective community development in rural Western Oklahoma. You may give the element the same rating that you did in the previous round, or you may change your response.

Please take a few moments to review and rate the statements listed and return your answers to me by June 17. Should you have any questions, please contact me at [redacted] or my advisor, Dr. Michael Miller at [redacted]. For questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University IRB Coordinator, at (479) 575-2208 or by email at irb@uark.edu. Thank you again for your continued cooperation. Your involvement is greatly appreciated.

Sincerely,

Anita (Hylton) Thompson

Doctoral Candidate

Appendix I: Round 3 Survey

The elements listed below represent potential elements necessary for effective community development. In this third and final round you are asked to review both your responses and the groups' consensus data. The mean, median, mode and standard deviation for each have been provided. Your original ratings are highlighted in red. After reviewing this information, please rate each element on a 1-to-5 Likert-type scale based on the extent you believe the element listed is necessary to effective community development in rural Western Oklahoma.

1= No Agreement

2= Little Agreement

3=Medium Agreement

4= High Agreement

5= Very High Agreement

Please be selective as you review the statements. Although many elements may be necessary, try to distinguish higher and lower priorities with your scoring.

To what extent do you believe the following elements are necessary to effective community development in rural Western Oklahoma:

	Group Mean	Group Median	Group Mode	Previous Indiv. Answer	No Agreement	Little Agreement	Medium Agreement	High Agreement	Very High Agreement
Transportation Infrastructure (i.e. Roads, Bridges, Highways)	4.6	5	5	4	1 ____	2 ____	3 ____	4 ____	5 ____
Availability of Housing	4.35	4	5	3	1 ____	2 ____	3 ____	4 ____	5 ____
Public Education	4	4	4	3	1 ____	2 ____	3 ____	4 ____	5 ____

Safety (police, sheriff, fire, etc.)	4	4	5	4	1	____	2	____	3	____	4	____	5	____
Utility Infrastructure other than water (i.e. sewer, gas, electric, trash, storm drainage)	4.75	5	5	4	1	____	2	____	3	____	4	____	5	____
Committed Leadership	4	4	5	3	1	____	2	____	3	____	4	____	5	____
Ability to sustain a project after it is completed (i.e. maintenance, employees, advertising, etc.)	4.1	4	5	4	1	____	2	____	3	____	4	____	5	____
Availability of Jobs	4.2	4	4	5	1	____	2	____	3	____	4	____	5	____
Availability of Water	5	5	5	5	1	____	2	____	3	____	4	____	5	____
Availability of Funding	4.25	4	4	4	1	____	2	____	3	____	4	____	5	____
Availability of Quality Workforce	4.5	5	5	4	1	____	2	____	3	____	4	____	5	____
Healthcare	4	4	4	3	1	____	2	____	3	____	4	____	5	____
Communication Infrastructure (i.e. broadband, high-speed internet, cell service, technology)	4.4	4.5	5	4	1	____	2	____	3	____	4	____	5	____

Please return by June 17, 2014 to [redacted] or by faxing it to [redacted].

Thank you for your participation! If you have any questions please feel free to contact me.

Appendix J: Table 1

Table 1

Descriptive Statistics for Round 2 Responses about Successful Community Development Elements

Element	Mean	Median	Mode	SD
Availability of Water	5.00	5.00	5.00	0.0000
Utility Infrastructure	4.75	5.00	5.00	0.4443
Transportation Infrastructure	4.60	5.00	5.00	0.5026
Communication Infrastructure	4.40	4.50	5.00	0.6806
Availability of Quality Workforce	4.50	5.00	5.00	0.6882
Availability of Housing	4.35	4.00	5.00	0.6708
Committed Leadership	4.00	4.00	5.00	0.8584
Master Plan/Strategic Planning	3.65	4.00	4.00	0.8127
Availability of Funding	4.25	4.00	4.00	0.7164
Spirit of Communication, Cooperation and Openness	3.45	3.50	4.00	0.8870
Community drive to make things happen	3.65	4.00	4.00	0.8751
Awareness/Expansion of e-Commerce	2.95	3.00	3.00	0.9987
Public Education	4.00	4.00	4.00	0.7947
Infrastructure improvements specific to industrial expansion	3.75	4.00	4.00	0.6387
Methods to attract business and industry	3.90	4.00	4.00	0.6407
Availability of Land/land Development	3.95	4.00	3.00	0.8256
Availability of quality job training programs	3.55	4.00	4.00	0.9987

(table continues)

Table 1

Descriptive Statistics for Round 2 Responses about Successful Community Development Elements (Cont.)

Element	Mean	Median	Mode	SD
Sense of regionalism	2.75	3.00	3.00	1.0669
Reduction of permanent intellectual attrition	3.30	3.00	3.00	1.0809
Quality of life activities/amenities	3.60	4.00	4.00	0.8826
Availability of informational resources to support community development	3.35	3.00	3.00	0.9333
Healthcare	4.00	4.00	4.00	0.8584
Senior Citizen Centers/ Programs	3.15	3.00	3.00	0.8751
Youth Centers	3.15	3.00	3.00	0.8751
High Quality Affordable Child care	3.65	4.00	4.00	1.0400
Pipeline of younger community leaders	3.50	4.00	4.00	1.1921
Availability of Jobs	4.20	4.00	4.00	0.8335
Shared Community Vision	3.40	3.00	3.00	0.7539
Good relationships with state/national leaders	3.35	3.00	3.00	1.0400
Advertising of area amenities	3.20	3.00	3.00	1.0052
Safety	4.00	4.00	5.00	0.9177
Service mapping, asset mapping, gap analysis	3.10	3.00	3.00	0.9119
Places for everyone to meet, parks, community centers, entertainment facilities	3.15	3.00	3.00	0.9333
Less EPA control	2.60	3.00	3.00	1.1425

(table continues)

Table 1

Descriptive Statistics for Round 2 Responses about Successful Community Development Elements (Cont.)

Element	Mean	Median	Mode	SD
Federal government out of State business	2.55	2.00	2.00	1.1910
Get rid of Obamacare	2.40	1.50	1.00	1.6983
Increase wind power	2.85	3.00	3.00	1.1367
Increase drilling activity/ start pipeline	2.80	3.00	3.00	1.0052
Community involvement/support	3.75	4.00	4.00	0.9665
Fire protection due to draught	3.90	4.00	4.00	0.9679
Ability to sustain a project after it is completed	4.10	4.00	5.00	0.9119

Appendix K: Tables 4-16

Table 4

ANOVA: Single Factor for Availability of Water as compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	25	5	0
ASCOG	5	25	5	0
OEDA	5	25	5	0
NODA	5	25	5	0

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0	3	0	65535	*	5.29221
Within Groups	0	16	0			
Total	0	19				

* With all experts scoring this element as a 5, there is no variance, therefore it is not possible to calculate a P-value.

Table 5

ANOVA: Single Factor for Utility Infrastructure other than water (i.e.sewer, gas, electric, trash, storm drainage) compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	25	5	0
ASCOG	5	24	4.8	0.2
OEDA	5	22	4.4	0.3
NODA	5	25	5	0

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.2	3	0.4	3.2	0.0517	5.29221
Within Groups	2	16	0.125			
Total	3.2	19				

Table 6

ANOVA: Single Factor for Transportation Infrastructure (i.e. roads, bridges,

highways, etc.) compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	25	5	0
ASCOG	5	23	4.6	0.3
OEDA	5	20	4	0.5
NODA	5	23	4.6	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.55	3	0.85	3.09091	0.05683	5.29221
Within Groups	4.4	16	0.275			
Total	6.95	19				

Table 7

ANOVA: Single Factor for Availability of Workforce Compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	22	4.4	0.3
ASCOG	5	24	4.8	0.2
OEDA	5	22	4.4	0.3
NODA	5	24	4.8	0.2

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.8	3	0.26667	1.06667	0.39091	5.29221
Within Groups	4	16	0.25			
Total	4.8	19				

Table 8

ANOVA: Single Factor for Availability of Jobs compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	22	4.4	0.3
ASCOG	5	23	4.6	0.3
OEDA	5	19	3.8	0.2
NODA	5	23	4.6	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.15	3	0.71667	2.60606	0.08759	5.29221
Within Groups	4.4	16	0.275			
Total	6.55	19				

Table 9

ANOVA: Single Factor for Availability of Housing compared by COG

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	22	4.4	0.3
ASCOG	5	20	4	1
OEDA	5	21	4.2	0.7
NODA	5	22	4.4	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.55	3	0.183333	0.318841	0.811612	3.238872
Within Groups	9.2	16	0.575			
Total	9.75	19				

Table 10

ANOVA: Single Factor for Availability of Committed Leadership compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	22	4.4	0.3
ASCOG	5	21	4.2	1.2
OEDA	5	20	4	0.5
NODA	5	22	4.4	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.55	3	0.18333	0.31884	0.81161	3.23887
Within Groups	9.2	16	0.575			
Total	9.75	19				

Table 11

ANOVA: Single Factor for Availability of Funding compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	21	4.2	0.2
ASCOG	5	21	4.2	0.7
OEDA	5	20	4	0
NODA	5	23	4.6	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.95	3	0.31667	1.05556	0.39534	3.23887
Within Groups	4.8	16	0.3			
Total	5.75	19				

Table 12

ANOVA: Single Factor for Communications Infrastructure compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	23	4.6	0.3
ASCOG	5	22	4.4	0.8
OEDA	5	19	3.8	0.7
NODA	5	21	4.2	0.2

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.75	3	0.58333	1.16667	0.35325	3.23887
Within Groups	8	16	0.5			
Total	9.75	19				

Table 13

ANOVA: Single Factor for Ability to Sustain a Project Once Completed compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	18	3.6	0.3
ASCOG	5	21	4.2	0.7
OEDA	5	19	3.8	1.2
NODA	5	24	4.8	0.2

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	4.2	3	1.4	2.33333	0.11269	3.23887
Within Groups	9.6	16	0.6			
Total	13.8	19				

Table 14

ANOVA: Single Factor for Public Education compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	19	3.8	0.2
ASCOG	5	20	4	1
OEDA	5	20	4	0
NODA	5	21	4.2	0.7

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.4	3	0.13333	0.2807	0.83854	3.23887
Within Groups	7.6	16	0.475			
Total	8	19				

Table 15

ANOVA: Single Factor for Healthcare compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	19	3.8	0.2
ASCOG	5	19	3.8	0.7
OEDA	5	19	3.8	0.7
NODA	5	23	4.6	0.3

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	2.4	3	0.8	1.68421	0.21037	3.23887
Within Groups	7.6	16	0.475			
Total	10	19				

Table 16

ANOVA: Single Factor for Safety compared by COG

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
SWODA	5	19	3.8	0.2
ASCOG	5	19	3.8	1.7
OEDA	5	19	3.8	0.2
NODA	5	21	4.2	0.2

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.6	3	0.2	0.34783	0.79121	3.23887
Within Groups	9.2	16	0.575			
Total	9.8	19				