ABSTRACT OF CAPSTONE

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The Graduate School
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March 26, 2013
SEEKING SOLUTIONS TO GEOGRAPHIC INJUSTICE: THE IMPACT OF DISTANCE ON RURAL SECONDARY SCHOOL STUDENTS

Abstract of capstone

A capstone submitted in partial fulfillment of the Requirements for the degree of Doctor of Education in the College of Education At Morehead State University

By
C. Doug Ward
Williamson, West Virginia

Committee Chair: Dr. Carol Christian, Assistant Professor

Morehead, KY
March 26, 2013

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SEEKING SOLUTIONS TO GEOGRAPHIC INJUSTICE: THE IMPACT OF DISTANCE ON RURAL SECONDARY SCHOOL STUDENTS

The purpose of this paper is to find solutions to the problems of geography confronted by many students in rural America. The problem of distance from home to school has contributed to a myriad of problems including low academic performance, poor attendance and less participation in support services and extra-curricular activities. This study uses qualitative and quantitative data to demonstrate the negative impact of distance on student outcomes and provides two viable solutions to create a more equitable learning opportunity for all students, particularly those in remote areas that live great distances from home to school.

KEYWORDS: geography, education, distance, students, and solution
SEEKING SOLUTIONS TO GEOGRAPHIC INJUSTICE: THE IMPACT OF DISTANCE ON RURAL SECONDARY SCHOOL STUDENTS

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Dedication

This capstone is dedicated to all rural children unjustly denied the opportunity to reach their full potential based on the location of their home.
ACKNOWLEDGEMENTS

Throughout this three year journey, I have gone through an entire spectrum of emotions. I am grateful for the environment and support that have been offered to me by family, friends, and colleagues. I wish to thank my professors at Morehead State University for their assistance with this endeavor, above all, the highest acknowledgment goes to my chair Dr. Carol Christian for challenging, correcting, and supporting me to be the best possible educator.
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Chapter One

Introduction/Executive Summary

During the past decade in education, schools across the country have worked tirelessly to identify and address barriers to learning. One barrier often overlooked is the distance a student lives from school and what impact this factor has on student success. Distance from home to school and subsequent long bus rides for students have contributed to a myriad of problems for both families and school officials (Broton, Mueller, Schultz, & Gaona, 2009). Student issues impacted by distance from school include low academic achievement, high absenteeism, less extra-curricular participation and a lack of accessibility to attend after school and before school support service opportunities (Howley, Howley, & Johnson, 2002). High numbers of student absences negatively impacts student achievement causing students to fall further behind and off track to graduate (Orfield, 2004). The sense of belonging is critical to student attendance (Brown & Swanson, 2003). With little opportunity to participate in afterschool activities due to family transportation challenges exacerbated by poverty, distance from school disconnects students from being a part of the school culture. These issues contribute to poor academic performance, increased dropout statistics and the repeated cycle of poverty (Jimerson, 2007).

Geographic isolation is strongly associated with less educational attainment (Floyd, 1983; Lu & Tweeten, 1973; Wolson & Carskadon, 2003). Less educational attainment can negatively impact an individual's future earning potential (Orfield, 2004). The ability for children to easily access school establishes an academic
advantage for academic success (Howley, 1996). Additionally, educational attainment levels are lower among students who live far distances from their school. These numbers are further magnified in districts with a larger geographic radius that extends travel time from home to school (Howley, Howley, & Johnson, 2002). The relationship between geographic isolation and low levels of educational attainment also increases the likelihood of students dropping out of school (Howley, 1996). Ultimately, the impact of dropping out of school results in lost opportunity, lost capital, and lost earning power (Cuban, 2008; McCall, Donaldson, Coladarci, & Davis, 1992). Long bus rides impact rural students on a daily basis and can be detrimental to the education of the poorest and most rural children (Purdy, 1997).

This capstone therefore is guided by the idea that school districts that recognize the impact of distance from school can create systemic processes to counter the negative effects shaped by distance from home to school. By creating and implementing distance intervention strategies, schools can help students become academically successful, become active participants in school and better able to take advantage of support programs provided. Failing to address the needs of these disadvantaged students increases the likelihood of students failing to graduate and increases the chances of these students dropping out of school. The needs of these "distance kids", if left unchecked, pose consequences that can lead to a lifetime of poverty.
Problem Statement

Little evidence exists that rural and urban districts create systemic processes that address the disadvantages to students that are created by distance from home to school. Data collected from six Appalachian school districts in this study from Kentucky, Virginia and West Virginia indicated no processes were in place to address the issue of distance traveled from home to school for students. The research of Spence (2000) and Zars (1998) provided evidence of the negative influences of distance from home to school on students’ lives. This study called for one high school to work intentionally in addressing the needs of students, whose performance is obstructed by extreme distances from school. Answers to the problem need to be addressed so no student experiences geographic injustice. This problem, when moved to the forefront and by identifying barriers should force school leaders to work more intentionally to address this issue as they seek solutions to break the cycle of poor academic achievement, poor attendance and less participation in support services and extra school activities, factors hindered by distance from home to school.

Purpose of this Study

This study examined the Twelve Pole Distance-Initiative (TPDI), developed and implemented in Tug Valley High School located in rural, Mingo County, West Virginia. The purpose of the study was to examine the effects of the TPDI on high school students living in the community of Twelve Pole located 25 to 30 miles from Tug Valley High and 50 minutes to 80 minutes from home to school by bus. The study investigated the impact of the TPDI intervention strategies with the goal of
improving student academic performance, attendance, student sense of belonging through extra-curricular participation and participation in support services at the school. This study served as a means to better inform others of the problems associated with geographic location of home and school and the impact lengthy distances from home to school have on many students in remote areas of rural America.

Significance of the Study

There is minimal empirical research that examines distance from home to school and its impact on students. The limited research available hypothesizes that as the distance from home to school increases, so does the negative impact on student academic performance, attendance, extra-curricular involvement and student participation in support service activities (Khattri, Riley, & Kane, 1997; Armstrong, 2011). Students disadvantaged by remote geography and long distances miss more school and have less means to improve academic deficiencies compounded by the inability to access and attend after school remediation and tutoring programs. These same students are found to be more disengaged from school due to the inability to participate in extra-curricular activities as a result of transportation barriers created by distance (Malhoit, 2005).

Context of the Study

The Twelve Pole Distance Initiative (TPDI) was implemented in December 2010. Longitudinal data collected on the Twelve Pole area students indicated an average dropout rate of 39% for four years beginning in 2008 (Tug Valley High
School Attendance Records, Tug Valley Graduation Cohort Report). The general population of Tug Valley High School dropout data was 9% during this same period. According to graduation cohort reports compiled by the West Virginia Department of Education, the state of West Virginia dropout rate for 2011 was 2.7%. Though the Mingo County school community worked collectively to address the needs of all struggling students, this initiative focused specifically on the students attending Tug Valley High School living in the Twelve Pole community of rural Mingo County in Dingess, West Virginia.

Building level administrators first recognized the need to develop intervention strategies to address the barriers that affect academic performance, attendance, extracurricular involvement and accessibility to support services of the students who are at a disadvantage due to distance from school. A six-member distance initiative administrative team was formed to examine the distance from home to school issue that included the Tug Valley High School principal, two high school assistant principals, two high school counselors, one elementary school principal and the researcher of this study. High school students living in the Twelve Pole region, the furthest distance from school became the focus of this capstone study.

Data were analyzed during a four year period in the Mingo County School District. The high school administrators collected data on students living extreme distances from Tug Valley High School. Enrollment information indicated students located the furthest from the school lived in the Twelve Pole area of Mingo County. These students posted significantly lower academic performance, attendance, extra-
curricular and remediation program participation data. As the data presented below indicate, these students were at a disadvantage compared to the general population. From 2008-2011, the average Tug Valley High school student posted a 2.1 GPA. During this same time period, Twelve Pole students posted an average GPA of 1.8. Whereas, the general population attendance was 92% for Tug Valley students; however, Twelve Pole students missed on the average 12 more inclement school days compared to others due to school buses being unable to pick up students on roads that were determined impassable while school remained in session for the general population.

In 2011 - 2012 high school participation in extra-curricular school activities for the student population as a whole was 51%. Participation of students living in the Twelve Pole area was 3%. Numerous support services were offered in the form of after school and before school remediation and tutoring services. Participation in support services for Twelve Pole students was non-existent. Tug Valley student overall participation was 25%. Twelve Pole students both needed and wanted the extra help, but long distances from home to school posed barriers to these identified students and their ability to take advantage of such opportunities. According to demographic stats, Twelve Pole student participation in extra services and activities was non-existence due to lack of parent resources and support. These same students are often more detached from school than their grade level peers as a result of less participation in school activities. All of these issues compound the problems Twelve Pole students face that contribute to poor academic performance, poor attendance,
and less participation in activities and support programs. Without the necessary skills and supports to be successful, a cycle of generational poverty has evolved in the Twelve Pole region (United States Census Data, West Virginia State and County Demographic Statistics, 2010).

Research Question

This study addressed the following research question: Has there been a correlation between the development of the Twelve Pole Distance Initiative (TPDI) systemic processes of intervention for the Twelve Pole area students at Tug Valley High School and improved academic performance, attendance, ability to receive support services and participation in extra-curricular involvement?

Summary

The problem and consequences of distance from home to school have not been intentionally addressed in a systemic manner. The purpose of this capstone is to explore solutions to the problems created by the geographic location of home to school that many students in rural America are confronted with on a daily basis. The project will seek recommendations that will hopefully lessen the geographic injustice of children confronted by long distances from home to school. Recommendations explored for dealing with long distances from home to school include support services featuring modifications to the daily school schedule and a technology component to allow distance students to overcome the obstacles of long distances from home to school through electronic instructional methods on days transportation is not provided to the Twelve Pole students.
Definition of Terms

**Academic Performance**—the ability to study, apply and communicate acquired knowledge. Tasks in school are generally assessed scores representing level of proficiency of the task.

**Dropout**—a student who leaves school prior to completing the school year on track in four years of high school. Dropouts present a significant loss in terms of personal and societal opportunities.

**At-Risk Student**—students with high probability of failing academically. Identifiable factors need to be identified as early as possible to reverse the downward trend of the student.

**Credit Recovery**—a program for students who have failed a course to have opportunity to regain necessary school credit to progress toward graduation.

**Distance from School**—the geographic location from home to the school building. The context varies in terms of accessibility, ranging from rural to urban setting, roadways and time commitment necessary to travel from home to school.

**TPDI**—Twelve Pole Distance Initiative

**Poverty**—people with income less than that deemed sufficient to purchase basic needs of food, shelter, clothing and essentials. A chronic and debilitating condition that result from multiple adverse synergistic risk factors and affects the mind, body, and soul (Jenson, 2006).

**Generational poverty**—occurs where two generations have been born into poverty. This type of poverty is perpetual from one generation to the next generation.
Wimba- a computer-based computer program allowing groups to meet online for lectures, virtual office hours, review sessions, meetings and interviews allowing communication as if users were face to face.

Skype - a computer-based platform allowing users to communicate with peers by voice using a microphone, video webcam and instant messaging.

Moodle - a computer based social internet platform.

Thinkfinity - a computer-based product working with 10 of the nation's leading education organizations spanning 7 disciplines and product can be accessed by students and teachers as an educational tool.

Cognitive Tutor - a computer-based product students use individually to learn concepts and skills of math, science and reading.
CHAPTER TWO

Review of Literature

Schools that work intentionally to address student performance obstructed by distance from school can begin to break the cycle of poverty. The cyclical problems associated with poverty are a burden on American society (Payne, 2008). These problems impact economic levels of individuals, academic achievement and graduation rates (Payne, 2008).

Higher levels of education correlate with higher income (Payne, 2008). Research on rural education has shown geographic isolation is strongly associated with less educational attainment, that ultimately impacts income levels (Floyd, 1983). A student's ability to readily access school is easier for higher income families creating an advantage, that lead to higher levels of academic achievement than poorer grade level peers (Howley, 1996).

Wolfson & Carskadon (2003) and Lu & Tweeten (1973) revealed a negative correlation associated with long bus rides and academic achievement. Less educational attainment is magnified in larger geographic school districts (Howley, Howley, & Johnson, 2002).

The focus of this capstone deals with and accepts the premise of the negative impact of poverty on student achievement (Payne, 2008). Many rural children are from low SES homes that depend on daily bus rides to reach the school. The evidence of busing as influential on achievement can be evaluated through the work
of Bronfenbrenner (1979). Large amounts of time on the bus impacts time spent on doing homework and hinders parental time and opportunity to provide remediation at home. Separation from home reveals negative aspects including lower academic achievement (Lewis, 2004).

Educational attainment and earning potential are evident in Orfield (2004) Dropouts in America: Confronting the Graduation Crisis. Dropouts are the outcome that reflects lost capital and earning power illustrating the correlation between geographic isolation and low levels of educational attainment (Cuban, 2008). Student dropouts are three times more likely to be unemployed, two and a half times more likely to receive welfare benefits and three times more likely to be in prison when compared to high school graduates (Funk, 1999). These dire statistics compound the problems associated with low levels of achievement that leads to increased dropouts and increased poverty status.

The school experience is different for rural and urban students. Students in five states were assessed using the variables of academic achievement and high school completion rates. The conclusions, while holding constant the poverty variable revealed educational achievement and completion rates decreased as distance from school increased. Educational opportunities for rural students were hindered as students, as a result of distance were not able to access support services necessary to improve academic deficiencies (Howley, Howley, & Shamblen, 2001).

Rural poverty is defined as areas with populations below 50,000. Rural areas statistically have more single guardian households and resources. Residents have less
access to general services, support for disabilities and quality education opportunities (Jensen, 2009). The problems associated with rural poverty continue to rise and has exceeded the increase in poverty data since data collection began in the 1960's. The difference between the two poverty rates has averaged five percent over the last 30 years, with urban rates near 10-15% and rural rates near 15-20% (Joliffe, 2004). Poverty is further exacerbated by the geographic barrier of distance to school in rural regions. Issues stemming from distance from home to school, to a greater degree impact students of poverty in areas of academic performance, attendance and participation in support services.

Spatial variation is examined across rural and non-rural locales to examine the educational processes and outcomes revealing spatial differences in geography as a component of student achievement. This sociological perspective offers a multi-tiered conceptualization in which rural achievement deficits are viewed as a function and problem of the distance traveled by students. The sphere of influence on rural students is examined through two key institutions, the family and the school. When examined together, the analyses of the two factors; family and school give a better understanding of the positive impact of community schools or at a minimum the positive impact of eliminating distance to school for rural students (Rosigno & Crowley, 2001 p.14).

The downward path leading to a lifetime of poverty can be viewed through four specific categories. This capstone will analyze the negative impact of distance from home to school upon academic achievement, attendance, extra curricular
participation and participation in support services and examine solutions to geographic injustice.

This study is based on the research that demonstrates distance from home and school creates a form of injustice to distance students and puts these particular students at a disadvantage compared to their peers who live closer to school. A graphic representation of this capstone is provided in Table 1. Without the proper structures in place, injustices due to geographic location can negatively impact student academic performance, attendance, accessibility to support services and extracurricular activities. It is the purpose of this capstone to find solutions to address the difficulties aggravated by distance from school for students. This capstone will seek solutions, respond with interventions and maximize the school master schedule and instructional technology methods of delivery to minimize barriers for distance students.
Distance and Academic Performance

The impact of long bus rides and long distances from home to school are detrimental to student outcomes. Detrimental outcomes begin with the physical toll long bus rides have upon students (Wolfson & Caridakos, 2003). Adolescent sleep patterns are disrupted due to early and long bus rides (Wolfson & Caridakos, 2003). Wolfson and Caridakos (2003) offer one of the foremost studies supporting a
negative correlation between long bus rides and academic achievement. The findings revealed academic deficiencies related to interrupted sleep patterns of adolescents who rise early to catch the bus. This disruption contributed to less than optimal academic performance by these identified students (Wolfson & Carskadon, 2003).

Further analysis of rural school transportation issues revealed, in addition to an interruption of sleep patterns, a negative correlation is linked to academic achievement due to the actual length of time spent riding on the school bus. Student achievement based on grades and test scores in an Oklahoma school district revealed a negative correlation between length of ride and grades and test scores (Lu & Tweeten, 1973).

Travel time is a daily obstacle for students and families in many rural regions. Long distances from home to school and back erode family time and decreases student achievement (Fox, 1996). Long bus rides create inequitable opportunities for many rural students to be afforded the opportunity to participate in school activities and remedial programs. In addition, long bus rides correlated with lower grade achievement and poor study habits (Zars, 1998).

Findings from a West Virginia study concluded smaller geographic school districts had an academic achievement advantage over districts and communities that required long bus rides (Howley, 1996). In a qualitative study in Webster County, West Virginia, childhood experiences spanning two generations revealed the obstacles endured by students on the bus the longest periods of time. This qualitative study revealed the expectation for high academic achievement became secondary to
the endurance needed to simply to go to school given the circumstances of long bus rides and long school days (Spence, 2000).

Talen (2001) conducted a case study in three West Virginia counties. The focus of this study investigated the relationship between the school's location and the ability of the school to meet the needs of the students. The study revealed distance and less accessibility to support opportunities had a negative impact on academic achievement and test scores of the most rural students (Talen, 2001). According to Talen (2001), “the decision makers advocating actions which create greater distance for students, especially the consolidation zealots need to confer to higher principles of education” (p. 6). Berliner (2005) noted the zip code in which a student grows up in also affected a student’s education. Reasons for variation of achievement focused on the geographic location of the school building to home (Brown & Swanson, 2001). The placement of school buildings has a long-standing history. Before methods of transportation to school were an option, schools were strategically placed in communities where students could walk to school (Howley, 1996). With the advent of school consolidation and the privilege of riding to school on buses, rural and often poor students are forced to endure long distance rides to and from school. In an era of high stakes accountability, schools and districts must research the negative influences on academic achievement and distance from home to school when analyzing students in the gap that may well be the distance students.
Distance and School Attendance

Numerous studies support the positive correlation between school attendance and academic achievement (Snell & Mekies, 1995; Orfield, 1994). However, limited research is available on the impact of distance from home to school on attendance. The need exists for more research on the topic of distance from school with a focus on students in rural geographic regions that are heavily laden with low SES students (Friedkin & Necochea, 1998). More poverty students depend on buses to reach their school destination. Busing is a privilege embedded in the structure of American schooling and American society (Howley & Howley, 2001). Impoverished rural households are three times more likely to be limited in the availability of personal transportation means due to rising fuel costs (Howley & Howley, 2001).

Communities have endured a shift from small, neighborhood schools in the last 50 years (Scholossberg, Greene, Phillips, Johnson and Parker, 2006). This trend increased distance and travel time for students attending school (Friedkin & Necochea, 1998). Long bus rides are an obstacle for rural students and the lives of families in remote areas (Fox, 1996).

The exact extent of "too long" is an area needing more research. According to Howley (2001) there is a need for clearly defining long bus rides. Also, determination is needed to predict the point that the ride is detrimental to attendance (Howley, Howley, & Shamblen, 2001). Jimerson (2007) posed the same question stating, "there is a need for data on the impact of long bus rides and the point negative consequences begin to occur" (p.18).
In most cases, poor attendance precedes students dropping out of school (Balfanz & Byrnes, 2012). Dropping out of school presents many detrimental outcomes for both the individual and society. Nationally, 77% of rural students graduate from high school (Williams, 2012). Rural students with long bus rides exceeding 45 minutes statistically have a higher number of low SES students who are the greatest risk of dropping out of high school (Williams, 2012). The dropout problem in many instances is a reflection of a lack of will to educate all children and to provide all of them equal opportunity at a quality education. Not providing an equal opportunity for students living greater distances from school is an example of an educational systems' failure to educate all children and provide an equal learning opportunity for all.

As bus transportation was becoming more common nationwide, educators became more cognizant of the negative consequences of long distance bus rides (Volk, 1999). The problem continues to exist that rural bus rides are the longest of all bus routes in most districts therefore many times forcing more low SES students to endure a form of social injustice (Zars, 1998).

Anecdotal reports and studies with limited sample size make up the majority of research on the subject of distance and its impact on attendance (Fox, 1996; Meehan & DeYoung, 1987; O'Brien, 1981). Minimal literature is available comparing bus rides on local, state or district size (Howley, Howley, & Shamblen, 2001). The research of Jimerson (2007) & Spence (2001) depict the negative consequences of
long bus rides on such factors as academic achievement, extra-curricular and attendance and after school tutoring.

Distance Impact on Extra Curricular Involvement

Students who participate in extra-curricular activities at school post higher academic achievement outcomes, are less likely to drop out of school, have higher self-esteem and attend school more regularly (Holloway, 2000).

Students in extra-curricular activities "connect" more deeply with peer groups, school values and adults. Powerful relationships supporting human development are developed as a result of student participation in extra-curricular programs (Mahoney, 2000; Mahoney & Cairns, 1997; Reeves, 2008). Relationships are the cornerstone for appropriate human development and powerful change agents contributing to positive student development (Massoni, 2011). Sociological findings persist on the benefits of extra-curricular activities even after crucial dropout factors such as race, SES, and gender are controlled (McNeal, 1995). The strongest correlation was revealed in extra-curricular sports and band, further making the case for the need to provide an equal opportunity for extra-curricular participation for more students (McNeal, 1995). Holland and Andre (1987) revealed a direct correlation to participation in extra-curricular activities in minimizing the effects of undesirable characteristics such as lower delinquency rates. This parallels the work of Brown (2000), Holloway (2002), and Howie et al. (2010).

Students living long distances from school in rural regions are not afforded the same opportunity for extra-curricular involvement than those students living closer to
school (Howley & Howley, 2001). These same authors concluded long bus rides have a negative effect on achievement and extra-curricular involvement of rural students. This analysis coincides with eligibility academic requirements of high school state athletic associations. Driving to school and back home from practices is almost a necessity to participate in after school high school activities, thus exposing a socioeconomic inequity to poverty and rural students. Low SES students in greater numbers are more often denied the opportunity to participate as a result of transportation issues. The issue of social injustice again comes to the forefront. Due to geographic barriers, students with the greatest needs are excluded from opportunity. The equitable distribution of opportunities to participate in extra-curricular activities does not occur when children are excluded opportunity due to where the child lives in the district (Barnett, Christian, Hughes, & Wallace 2010). In Barnett et al. (2010), students are presented as more than a statistic but as a person impacted by decisions.

Jimerson (2007) examined participation rates in four West Virginia counties that included two large geographic county school districts that had consolidated high schools resulting in students being on buses for long distances and long periods of time. Jimerson (1997) revealed participation in extra-curricular activities impacted the amount of time involved in participation and school activities. The longer it took buses to reach the school, the less there was in student participation in extra activities thereby creating inequality for students who live a long distance from school being denied extra-curricular opportunities. Evidence demonstrated participation in school
athletic programs reduced the dropout rates in America by 40% (Holloway, 2002). Results from the National Federation of State High School Associations (NFSHSA, 1985) revealed 94% of students who drop out of school did not participate in some form of school activity. This evidence showed a need to not only provide opportunity for participation but to encourage student participation in extra-curricular activities.

Cases of long bus rides and students denied opportunities are examined in the anecdotal research of Spence (2000). Distance from school and extra-curricular opportunities caused generations of children to say “forget anything extra.” The stories included interviews and first person accounts of student desire to participate in school sports or activities, however the distance for poor students requiring bus transportation stymied the idea of being on a team (Spence, 2000).

Three geographically small Ohio districts were examined in the work of Reynolds and Reynolds (1990). Their findings echoed the work of Spence (2000), Reynolds and Reynolds (1990) “small districts had high participatory involvement and the primary reason was closeness of extra-curricular in proximity to the home” (p. 5). Student involvement in extra-curricular activities is a necessary part of the educational experience to produce well-rounded individuals (Black, 2002; Fredricks & Eccles, 2006).

The decrease in extra-curricular opportunity has contributed negatively to a change in community makeup (Biere, 1995). Forcing schools out of communities by creating long bus rides is detrimental to students. The diminishing concept of community is not beneficial to students due to the loss of support networks (Luloff &
Swanson, 1990). Smaller schools closer to the community find more students involved in extra-curricular activities (Nachtigal, 1982). The benefits of greater participation can be measured exponentially (Cotton, 1998). Participation in extra-curricular activities is considered a vital aspect of the educational experience. The impact of the benefits of extra-curricular participation gives cause to further examine the negative consequences of long bus rides for students and seek viable solutions to increasing participation and opportunity.

**Student Support Systems in Secondary Schools**

Secondary schools must develop methods to assist students who are academically deficient. Research has shown students who fail academic courses are at a greater risk of dropping out of school than their successful peers (Dynarski et al., 2008). A commonly cited reason for teens dropping out of school is that they lack necessary literacy skills to make needed progress (Kamil, 2003; Snow & Biancarosa, 2003). Support programs must be developed to provide opportunity for credit recovery and closing academic shortfalls. Many rural students and low SES students do not have educated parents at home capable of providing remediation. Schools are therefore are presented the task of offering support systems to at-risk students. Programs need to be developed to address the challenges that prevented student success during the regular school day. Remediation may include flexible pacing, modified schedules of instruction and alternative instructional delivery methods of teaching the content to meet the various student skill levels. In addition, extra
practice and more frequent assessments are needed to inform instruction and provide immediate feedback to students (Trautman & Lawrence, 2004).

Support systems are an important aspect of dropout prevention and a tool for increasing student achievement. Systems range from the Talent Development High School Model offering after-hours credit recovery and weekend and summer activities by extending the school day allowing for built in tutoring time (Kemple, Herlihy, & Smith, 2005). However, the aforementioned options are not equitable options for distance students. Options provided after school hours, on weekends, during summer and extending the school day are still challenges and barriers for distance students unless transportation is provided. Some secondary schools utilize online learning options (Watson & Gemin, 2008). There is evidence supporting the use of technology in helping students achieve graduation (Cavanaugh et al., 2004; Hannifan, 2002).

The West Virginia Legislature authorized an audit on the states' education department in 2010. Reporting in the Rural Policy Matters the findings concluded, "larger geographic districts had higher dropout rates, specifically as geographic size increases so does the dropout rate of high school students" (Legislative Audit West Virginia, 2010, p.36). District geographic size was a more powerful indicator of graduation rate than any other factor (Legislative Audit West Virginia, 2010). This finding inferred long bus rides are needed to cover larger geographic size districts and are detrimental to attendance posing a challenge to transportation to and from support services offered before and after school.
It is imperative for schools to develop support systems to assist students facing distance as an obstacle to accessing support services and confront the difficulties caused by distance for students in rural areas. If transportation is not offered, then it is not an option for distance students in the gap. Schools must continue to evaluate the options they provide students and analyse how effective and equitable these options. Too many schools blame students for being lazy and poor parenting as the reasons some students do not participate in remediation offerings. The problem may well be the system of options offered by educators are not viable ones for rural, disadvantaged distance students.

Response to Intervention

Response to Intervention (RTI) is a particular model type providing support services assistance to students. RTI is defined as "the practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals and applying child response data to important educational decisions" (Batsche et al., 2005, p. 3). The RTI model is an instructional, assessment and intervention process for systemically delivering instruction, monitoring student progress and making decisions about the need for varying instruction to meet the needs of the students. The model is proactive and provides both preventive and intervention services. The fundamental question RTI addresses is "Under what conditions will a student successfully demonstrate a satisfactory response to the curriculum?" (Juneau, Beebe-Frankenberger, Smith-Ferriter, Hunsaker, 2008).
According to Carey (2012), RTI should provide a framework to meet the needs of all students from struggling to high achievers. In the work of Berhardt and Herbert (2011) a comprehensive plan is presented to fully implement the RTI model. Berhardt and Herbert (2011) offer a plan for implementing RTI in secondary schools. When and how RTI is offered is left to individual districts and schools.

The challenge to RTI is in making the model applicable to a school’s unique characteristics. The RTI model for all students borrows from its origin as a special education intervention (Odom et al., 2005). In examining RTI for all learners, interventions are supported in both academic and behavioral domains (Kratochwill, Clements, & Kalymon, 2007). However, RTI must be reworked to meet the needs of the students living a long distance from school. Only by alternate schedules can RTI meet the needs of distance students. Schools must assume responsibility for establishing guidelines of effectiveness to assist all students including those disadvantaged by distance from school. Interventions, while ‘evidence -based’, and ‘best practice, must meet the needs of students negatively impacted by geography during the school day or after school, electronically (Fuchs & Deshler, 2007).

Distance kids are faced with the challenge of not being able to attend after school or before school intervention strategies due to transportation barriers.

Change and academic progress is achieved through deliberate interventions. Deliberate interventions as defined by McCook (2006) include solutions based on matching curricular materials and instructional level, modification to daily instructional schedules and schedule alteration to increase opportunities for student
engagement. This is paramount in developing RTI programs for students traveling long distances from school and requires a change from traditional after school support systems. Many of the students traveling long distances are not afforded transportation back to their home, only to the nearest main road. This creates a disadvantage as safety and economics come into play for the parents of these children. McCook’s work provided a basis for implementing RTI in high schools and can be adapted to schools with students known as ‘distance students’. McCook stressed the interventions must work logically within the needs framework of the school, be research based and utilize teacher data as a top priority in solving individual student problems. McCook’s proposal follows a philosophy of “is this the best we can do for our students” (McCook, 2006, p.14).

Student support systems become effective at different levels for different students. Systems must account for geographic injustice to be effective. The mandate is upon leadership to establish a model that meets the needs of all students including those impacted by long bus rides. Educators must identify the problem areas from home to school for students. Interventions and accommodations should impact learning and are not exclusive of Maslow’s (1943) hierarchy of needs which states students cannot be expected to function at a high academic level when basic needs for food, shelter, medical care, safety, family and relationships with others are not met. These basic needs are not being met to varying degrees for many ‘distance kids’. The act of traveling can be a point of contention for many rural families. Many rural winding roads are considered treacherous and unsafe for travel. This
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raises the point of needing to understand the dynamics endured by rural "distance kids" in constructing support programs as RTI in rural secondary schools.

**Smaller Learning Communities within RTI**

Smaller learning communities can have a profound impact on schools with different groups of students, including students negatively impacted by distance from home to school. Students impacted by "distance" would benefit from Smaller Learning Communities (SLC's). Small Learning Communities is a systemic method created for enhancing learning by developing smaller groups of students with common goals of learning. RTI is the system of scheduling smaller groups of students who share similar deficiencies with specialized content teachers to address the weaknesses in a timely manner.

It is important to examine the dynamics of Smaller Learning Communities. Felner et al. (2000) asserts the process is "more complex than simply putting fewer students in the building." The dynamics include school/grade enrollments, class size, student -ratios on teams or grades, number of students a teacher is responsible for across the school day, instructional grouping, block scheduling, length of class periods and the schedule and length of the school day (Felner et al., 2000). The benefit of SLC's is notable and utilization of cohorts impacted by distance is in and of itself an intervention. Since the 1980's there has been development of practices embracing change for students to seek motivation and engagement (Smith, 2010). The social nature of learning is initially introduced by Edward Glassman and originates the term "cooperative learning." McKeachie (1980) examined the social
nature of learning and strategies to foster deep processing. The bridge of disciplines is enhanced as the connections are explored in further research on "deep learning." (Smith & Colby, 2010). Smaller learning communities assist the social nature of learning though smaller groups learning that promotes a deeper understanding of the material and a deeper relationship with the teacher.

One benefit of SLC's is the attention given to student motivation (Felner & Adan, 1988). SLC's gives rise to student independence and ownership in individual learning (Gtazek & Sarason, 2007). The power of relationships bolstered by SLC's has been found to improve academic tests (Wentzel, 2005). SLC's as well have been found to improve motivation among students (Wigfield & Wagner, 2005).

Motivation is a concern in all schools as schools attempt to educate all students and strive for 100% graduation rate. In regard to motivation, social psychology concludes situation and context are the primary factors (Schneider, Gruman, & Coutts, 2005). In this manner, social learning is a motivation factor behind small learning communities. The attitude of individuals is affected through a variety of influential factors (Baron, Branscombe, & Byrne, 2009). Social Identity Motivation Theory states individual fulfillment comes from identifying with the distinguished group (Perreault & Bourhis, 1998; Tajfel & Turner, 1986). Smaller learning communities create a sense of belonging. Jackson (2011) states group identity creates a connection with others in the group that fosters attachment, commitment, and teamwork being established. Individual's relish in being identified with factors that makes the group unique. Social identity theory proposes that an individual with low self-esteem will
increase self-esteem as a result of being part of a unique group (Abram & Hogg, 1988). This can be an important component for assisting students of "distance". Smaller learning communities made up of "distance students" can help alleviate socio-emotional issues and inappropriate behaviors as well as drug abuse. The developmental setting of SLC's raises the point of creating a collaborative culture and empowering teachers. As noted by Ryan and Deci (2000) "when students feel more effective and able to determine their own outcomes they are also more likely to be committed to the process."

While SLC's are generally regarded as a strategy in helping large schools become more personal to students in building relationships, SLCs can be utilized in small, rural high schools for the same purpose. Felner (2000) stressed the problems of gaps in monitoring students show the largest improvement in motivation and socio-emotional/academic achievement outcomes occur when personalized learning in the way of SLC's are integrated into the culture of a school.

Creating Injustice: The Impact of School Consolidation in Appalachia

School consolidation promoted closing smaller schools and creating a single, larger school. Consolidation has become a common occurrence in Appalachia. Reasons for consolidation included declining enrollment and decreased funding. Consolidation has forced an increase in long bus rides for rural students and limited access to the school community and school culture.

Rural high schools that are closed to consolidation are not merely buildings in many small Appalachian communities. These schools are much more to the
communities they are embedded in. Community high schools allow parents to actively support students in both educational and extra-curricular pursuits. For many students, the community school meant not riding a bus to school over treacherous roads for long periods of time as these smaller schools provided a better opportunity for students to be engaged in school activities closer to home. Consolidation exacerbated many problems for parents who were unable to afford transportation and involvement in extra-curricular activities. The added burden associated with increased distance upon family finances and the time and travel for many rural remote families resulted in a decrease in academic performance, attendance and participation in support services and after school activities.

Schools are the heart of many Appalachia communities. Appalachian communities are proud places with a sense of common location. They are recognized as the sharing social institutions that aids in developing community identity (Hinsdale, Lewis et al. 1995). Place reinforces existing social bonds. Oldenburg (1999) explains three realms of experience in Appalachia. The three realms are domestic life, work life and social life. Removing the school from the community removes the third realm that focuses on the school as a gathering place. Social interaction is harmed in Appalachia by removing the community school.

Community high schools in Appalachia tend to serve as a community center. Social networking is linked at the community school (DeYoung, 2002). The motivation as previously mentioned of students feeling a sense of “belonging” is
removed when community schools are consolidated and students are forced to attend a new setting with longer distances between home and school.

The decision to close smaller schools is a particularly divisive one in many communities. Resistance to consolidation meant the state exerting authority and taking control of local school boards of education, therefore mandating consolidation regardless of community input. For the purpose of this study, in Mingo County, West Virginia, four high schools were closed and consolidated into one high school resulting in an increase of long bus rides for many students therefore limiting access to support services and extra-curricular activities. Consolidation resulted in students traveling long distances (over an hour on a bus) to the new high school. The loss of community high schools took away from the communities the social realm of Appalachian life (Kelly, 2007). For all the positives advocated by the proponents, too little attention was given to the negatives of consolidating and closing community schools and the impact of increased distance from home to school and back.

In some rural counties, 10% of the budget is devoted to transportation costs (Reeves, 2004). The costs are expensive in financial terms. As consolidation occurred to save money, an increase on the school and district budget increased in transportation costs. Hidden costs not reflected in school board budgets becomes a cost to our children, their families and the communities they call home (Lewis, 2004). These costs are deep and profound. Emotionally, physically, psychologically and socially, the cost of long bus rides negatively affects students (Lewis, 2004).
A study in Webster County, West Virginia estimated during a four-year period the total hours spent riding a school bus totaled 2,160 hours. This is the equivalent of a 54 forty-hour of work week (Killen and Sipple, 2000). As supported by (Purdy, 1997), long bus rides are detrimental to the education of the poorest and most rural children (Purdy, 1997). The obstacles for rural and urban students are different according to Howley, Howley, and Shamblen (2001). Poverty was a culprit in both findings and the problem was made worse due to the distance from home to school in limiting educational opportunities for rural students.

Proposals to close small schools and consolidate into larger ones are often justified by finances. The miss-assumption is the curriculum will be expanded and opportunities for students enhanced, ultimately improving student achievement and student development (Leithwood & Jantzi, 2009, p.484). What schools do not examine in depth is what impact the increase in distance from home to school has in the move to consolidate and the role it plays on student success and failure.

West Virginia legislative audit of the effectiveness of the West Virginia school system released in January 2010 revealed the detrimental impact of consolidation and resulting long bus rides. The audit report found district size exerts greater influence over the status of students graduating high school than socioeconomic standing and academic performance (West Virginia Legislative Audit, 2010). A negative correlation was revealed between dropout rates and district and school size (West Virginia Legislative Audit, 2010). The increased opportunity and
class offerings do not result in improved academic achievement as suggested by the advocates of consolidation.

The negative consequences of consolidation outweighed the benefits in a variety of ways. The negative consequences are evident in student drop out numbers and its impact on the state's lower income levels, higher rates of public assistance, increased levels of incarceration, and perpetuation of generational poverty. The legislative report findings recommended the establishment of smaller learning communities within consolidated rural high schools as a means to assist with student achievement and minimize the negative impact on children (West Virginia Legislative Audit, 2010 p.36).

Social Justice

Young (1990, p. 46) states "schooling is obligated to actively eliminate the oppression of social groups, especially cultural imperialism, as manifested in curriculum, educational policies and practices, school structures and norms." The literature is abundant with definitions of social justice (Blackmore, 2002; Bogotch, 2002; Dantley, 2002; Furman & Gruenewald, 2004; Gewirtz, 1998; Goldfarb & Grinberg, 2002). Gewirtz (1996, p.4) asserts a definition based on "ideas of disrupting and subverting arrangements that promote marginalization and exclusionary processes". Goldfarb and Grinberg (2002) define social justice "as the exercise of altering institutional and organizational arrangements by actively engaging in reclaiming, appropriating, sustaining and advancing inherent human rights of equity, equality, and fairness in social, economic, educational, and personal
dimensions” (p. 162). Sapon-Shevin (2003) stated, “Inclusion is not about disability ... inclusion is about social justice. By embracing inclusion as a model of social justice, we can create a world fit for all of us” (p. 26, 28). Social justice is of paramount importance in the education of students. Therefore, educational leaders must be equipped with the tools to implement programs with the goal of social justice. Programs for developing educational leadership practitioners must focus on social justice. McKenzie, et.al (2008) stated educational leadership programs must assist marginalized students through improving academic achievement, equipping children to be critical analyzers as citizens of a democracy and be offered a challenging and rewarding education. The goal of schools must be to close the gap of inequities existing today. Closing the injustices faced by students that live at a distance disadvantage from home to school should be a priority of all school leaders. Clarity in defining every component of social justice does not exist. However, the goal of practitioners must be to recognize differences and develop applicable plans to remedy the problems brought on by social injustice. McKenzie et.al (2008) states “schools are coupled to the dominant norms of injustice and inequality which means it may be possible to have social justice as a dominant norm within one school or school district while the larger society has a dominant norm of injustice and inequity.” It must be the work of educational practitioners to eliminate the dominant norm of injustice in educating students.

Students required to travel distances from home to school are a marginalized group. These students are discriminated against on the basis of being forced to travel
long distances to school to acquire the same level of educational attainment and
personal development as the students not impacted by the necessary travel to and
from home to school. Higher education programs are being entrusted with producing
practitioners who possess the skills to recognize and alleviate social injustices.
Leaders must present systemic programs and implementations to address inequities.
It is possible to assess social injustices in today’s schools through cultural audits as
well as by using the methodology implemented in this capstone. Methodology
implemented included analyzing the data of those students most impacted by living a
long distance from school. The particular component of social injustice in this
capstone is the impact on student achievement, attendance, ability to access support
services and the ability to participate in extra-curricular activities for students
disadvantaged by distance from home to school.

Distance from home to school must be categorized as a handicap to students
the same as racial discrimination, sexism or gender inequity. Ggelton (1982)
suggested isolation regardless of poverty affects student ability to access resources,
and has an influence on student achievement. Ggelton (1982) elaborated for the
development of identifiable sets of variables related to social, economic and
geographic characteristics to be an integral part of educational decisions. The lack of
using data noting the discriminatory actions of educational decisions perpetuates the
marginalizing of students and results in perpetual and generational poverty.
Valentine (1970, p. 5) stated; “dysfunction accompanies poverty ultimately becoming
internalized and culturally heritable – creating poverty and structural social
The tangible value of school show a connection between the distribution of material good in society and the distribution of curricular goods in schooling are related. Williams (1961, p.25) wrote, “knowledge mirrors social patterns of have’s and have-not’s.” Historically knowledge including information and skills represent a source of power and has been deployed as a means of marginalizing certain groups (Apple, 1999; 2002; Fraser 2002, 1997; Giroux 1997, 2001).

Reframing our understanding of knowledge to honor and integrate academic and contextual components for the betterment of students is necessary to re-position marginalized groups such as “distance kids.” Educational leaders are viewed as keepers of knowledge to rural constituents (Johnson, 2000). It is important, particularly in rural areas for educational leaders to empower rather than exercise power over historically marginalized people (Johnson, 2000). School can be a facilitator for those struggling to have a voice and a mediator to improve the cycle of economic and social inequity in rural areas (Johnson, 2000).

Place identification is important in empowerment of marginalized “distance kids”. Social justice must include pedagogies that incorporate rigorous curriculum and elements of place-based learning as a component of Smaller Learning Communities (SLC’s), (Gruenewald, 2003; Hutchinson, & Orr, 2004). Place-conscious capacity building is a tenet of embracing place and strengthening value among marginalized populations including SLC’s (Johnson, Thompson & Nagle, 2012). Community development and appreciation in school reform is not possible
without the development of appreciation and respect for place being recognized as important. This is a foundation of the democratic process (Haas & Nachtigal, 1998).

Heilman (2004) asserts educational researchers have overlooked the struggles of many poor Appalachian students subjected to long bus rides to and from school resulting in the classification of “distance kids”. Mathews (1996, p. 10) stated, “With the onset of the consolidation movement particularly in Appalachia, schools are now disconnected from local communities and the existing environment restricts the very nature of the school as an institution with a mission to serve and continue public good.” It is only through action-based systemic plans children slighted unjustly can reap the benefits of a school setting based on social justice. School leaders have made changes that have increased academic achievement for students suffering from social injustice ranging from students of color and students for whom English is not their first language (Oakes, Quartz, Ryan, & Lipton, 2000; Perry, 1997; Scheurich, 1998; Scheurich & Skrla, 2003; Vibert & Portelli, 2000). Social justice must be pursued and solutions offered to address the problems of distance from home to school for students in many rural communities. Distance from home to school is an area going forward needing more research and one that cannot be neglected. It is the intention of this capstone to offer solutions for those students enduring social injustice as a result of living a long distance from school.

**Summary**

The Twelve Pole Distance Initiative seeks solutions to the problems associated with distance from home to school. The students who attend Tug Valley
High School from the Twelve Pole region of Mingo County in rural West Virginia have on average a one-hour, one way bus ride every school day. These students are not afforded the same educational opportunities as students living geographically closer to school. The problems of the Twelve Pole region have been perpetuated over many years. The factors of distance and long bus rides have had a negative impact on academic achievement, school attendance, the opportunity to access adequate support systems and participation in extra-curricular activities. The historical consequences include a region mired in poverty, with high dropout rates and low-grade achievement. The differences in recognizing subgroups such "distance kids" or those disadvantaged by distance from home to school is paramount in improving the achievement gap. The need for systemic solutions to addressing the disadvantages confronted by "distance kids" is imperative and must become a part of the discussion to close the achievement gap in public school. Policy formation must be channeled through existing data and examples by practitioners to bring about solutions for all students disadvantaged by distance from home to school. The purpose of this capstone is to provide one such example and bring geographic justice to students negatively impacted by distance.
CHAPTER THREE
Methodology

This chapter describes the research question, context, research design, the initiative, instruments and limitations in this study.

Research Question and Purpose

The purpose of this study was to investigate the impact of distance on students attending high school in rural areas and the impact of the TPDI in finding solutions. This study hypothesized that students attending high school in rural areas are disadvantaged as a result of distance impacting student outcomes in academic achievement, school attendance, participating in extra-curricular activities and in accessing necessary support systems. The goal of this work is to find solutions to the geographic injustice endured by many rural students.

This study addressed the following research question:

Has the development of the Twelve Pole Distance Initiative [TPDI] systemic processes of intervention enabled the Twelve Pole area students at Tug Valley High School to improve their academic performance, school attendance, participation in extra-curricular activities and ability to access support services.

Context/ Sample

Tug Valley High School is located in Naugatuck, West Virginia. Naugatuck is located in northern Mingo County. Tug Valley High School was created in 1987 by consolidating Kermit High School and Lenore High School. Tug Valley High School
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is located seven miles south of the former Kermit High School and eight miles east of
the former Lenore High School.

Dingess is a community formerly served by Lenore High School, located 19
miles from Tug Valley High School. The Dingess community is the first organized
settlement known as Twelve Pole. Twelve Pole Creek extends 13 miles along
winding rural roads and including numerous remote “hollows”. Tug Valley’s
attendance area includes Twelve Pole Creek located 19 miles from the high school
and extends 32 miles from the high school in rural terrain. This attendance area
extends to the farthest point of the Mingo County. It neighbors both Lincoln County
and Wayne County to the northeast and north respective.

The demographics of the Dingess/Twelve Pole region include a per capita
income of $16,949 based on a population of 1,937 residents. The per capita income is
ten thousand dollars below the national average. Nineteen per cent of the residents
have an income 50% below the poverty level. Data for free lunch qualifications in
Twelve Pole averages 92% student eligibility rate.

Tug Valley High School demographics provided in Table 2, revealed a school
population of 424 students in grades 9-12 with little to no diversity. Twelve Pole
community demographics within Tug Valley High School revealed a student
population of averaging 28 students over a four year period. A total of 28 students
living in the Twelve Pole region were included in the target population of this study
while attending Tug Valley High School. Tug Valley with grades 9-12 is one of two
high schools in Mingo County. Two feeder middle schools transition students to Tug Valley: Lenore Middle School and Kermit Middle School.

### Table 2: Student Demographics for 2011-2012

<table>
<thead>
<tr>
<th>College</th>
<th>TVHS</th>
<th>Twelve Pole Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Students</td>
<td>424</td>
<td>28</td>
</tr>
<tr>
<td>Caucasian</td>
<td>420</td>
<td>28</td>
</tr>
<tr>
<td>African American</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>American Indian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Limited English</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Free and Reduced Lunch</td>
<td>368</td>
<td>27</td>
</tr>
<tr>
<td>Students With Disabilities</td>
<td>28</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note: Information provided in this table was retrieved from the Tug Valley High School Information System as part of West Virginia Educational Information System (WVEIS) December 2011. TVHS = Tug Valley High School; Twelve Pole Students = Students attending TVHS from Twelve Pole Area.*

At the inception of this study, Tug Valley High School did not have a systemic process for monitoring student data on the Twelve Pole students living great distances from school. No clearly defined structure was in place to identify the barriers and needs of the Twelve Pole area students in order to implement intervention strategies for improvement. Prior to this capstone initiative, support
services offered to improve academic performance deficiencies were available only through after-school tutoring services. Strategies to address the loss of instruction to Twelve Pole students on additional days missed due to the inability of bus routes running in this area were non-existent. Systemic processes to help the academic success and player eligibility for Twelve Pole students involved in extra-curricular were inconsistent and dependent upon the diligence of the individual coach the student was associated with.

**Research Design**

This study is a mixed method study using both qualitative and quantitative data. The design allowed the researcher to examine the impact of this initiative on the distance students. Particularly this capstone examined distance from school and its impact on academic performance, attendance, participation in remedial support services and extra-curricular activities. Information collected from student and teacher surveys and the student data reporting system provided preliminary information on the impact of the Twelve Pole Distance Initiative on Twelve Pole students.

**Describing the Initiative**

The Twelve Pole Distance Initiative (TPDI) was developed as an intervention to address the issues impacting students from Twelve Pole who live a long distance from Tug Valley High School. Data indicated these student’s historically posted low grade point averages, poor attendance, low participation rates in extra-curricular activities and limited access to support services. This project was developed and
implemented after discussion between the Tug Valley High School Principal and the author of this work on the need to address the poor outcomes of Twelve Pole students. A distance initiative committee was formed to address the barriers to students exacerbated by distance from school that included the Principal, two Assistant Principals, two guidance counselors and two members of the Superintendent's staff and the author of this work. Using research, data collection and survey information, the TPDI was implemented in December of 2010. Twelve Pole student data was monitored and recorded for this study over a two and a half year period that the initiative was implemented. The initiative was implemented in two phases. Phase I began in the August 2011-12 school term. Phase I included modifications referred to as (MODS) that impacted the regular school schedule. Phase II was implemented in December of 2011. Phase II referred to as One to One (OTO) tapped into electronic instructional methods of delivery in order to provide services to distance students. The placement of students in MODS and OTO was a collaborative process determined between teachers and administrators. The results of MODS and OTO for the entire high school population were analyzed each nine week grading period by the principal and assistant principal in collaboration with the high school teachers. The Twelve Pole sample group were analyzed by the researcher and the principal each nine week grading period.

Phase I

Phase I of this study involved changing the school master schedule. This phase impacted the schedule by implementing modifications (MODS) to create
opportunities for students to have access to remediation and credit recovery during the school day. Prior to this initiative, remediation opportunities were held after regular school hours, creating a barrier for distance students in being able to attend. MODS involved flexible scheduling that extended the school day by ten minutes and trimmed transition time to three minutes creating a one-hour block of remediation time daily. This allowed the creation of two, thirty-minute MOD sessions for support services and remediation. While one group of students was scheduled for lunch, the other group was placed in MODS for various academic services including credit recovery, tutoring and test preparation. MODS were designed to keep students on track to graduate, eligible in extra-curricular activities and minimize course failure rates. These sessions were flexible in nature and students could move in and out of MODS as needed.

MODS met three days a week on Mondays, Tuesdays and Wednesdays serving students who had been absent from school or who were in need of support services to improve academic deficiencies. The MOD block served as a means for students to practice test-taking skills, improve classroom assessments and standardized test results. Thursday MODS were designed as advisor-advisee time. This component arranged the school into smaller learning communities where small groups of students were assigned to an advisor to monitor attendance, grades, behavior and other student needs.

In inclement weather days, bus routes to Twelve Pole were cancelled. MODS was designed with the intent to be a viable option for students to improve academic
achievement during the school day. However, for students living in the remote Twelve Pole area where roads were many times deemed impassable, these students were unable to get to school and attend the face to face MOD sessions. The remainder of the student body was at an advantage in being able to continue on with MODS during the school day therefore creating an inequitable learning opportunity for Twelve Pole students who could not get to school.

Phase II

Phase II, referred to as the One to One (OTO) intervention strategy was implemented in December 2011. One to One provided the use of free laptops to Twelve Pole students. This strategy connected students electronically to school, instruction, remediation and support services on an on-going basis regardless of a student's location from home to school. This option provided students the opportunity for uninterrupted learning on inclement weather days when buses did not run to their remote locations, particularly the Twelve Pole community. Monies to purchase computers in support of this intervention were allocated using State Step 7 funds allocated to the Mingo County School District. State Step 7 monies were generated from state tax revenues. The distribution of the funds were at the discretion of individual districts and schools. For this study, the administrators working on the distance initiative determined the money would purchase laptop computers for students.

Each Twelve Pole student was equipped with a laptop computer and applications including Wimba, Cognitive Tutor, Moodle, Thinkfinity and Skype that
provided face to face opportunities electronically outside the confines of the school building. These electronic tools allowed students impacted by distance to be a part of the support service intervention through Wimba and/or Skype. Through the availability of these electronic opportunities, students could access instruction and support from home on a regular basis and on inclement weather days when school bus routes to Twelve Pole were cancelled. Students were able to access assignments through electronic methods of delivery and have an opportunity for uninterrupted learning and an equal opportunity to complete work from home. This provided an equitable access to learning for students living in Twelve Pole.

The connection capability was as high as 84% of the Twelve Pole region in 2011. The initiative has been a driving force with community leaders and legislators to get connection capability to 100% for the region’s students in the near future.

To ensure the effective use of the laptops, a set of guidelines, expectations and trainings were developed for teachers and students before computers were issued that included: 1) student responsibility for care and safe keeping of the laptop computer 2) appropriate uses of technology for instructional purposes and 3) differentiation of instruction through technology. Goals identified by the team for the OTO Program: 1) increase student academic performance in all classes 2) increase student attendance 3) increase accessibility to support services 4) increase academic eligibility in extra curricular activities.

A primary focus of the Phase II OTO option was to enable distance students the opportunity to improve academic performance by keeping up with assignments
and instruction on inclement weather days when buses did not come to the Twelve Pole area. Mingo County school district had the power within their governance to code Twelve Pole students as excused due to transportation not running in their area. Students were counted as present and granted permission to complete assignments using the electronic methods of delivery. This option positively impacted Twelve Pole students in the area of attendance if these identified students successfully completed all assigned work on "no bus" days. With regard to impacting participation in support services, the OTO option offered Twelve Pole students remediation electronically with on-going communication to teachers through blackboard, skype and wimba. Distance students as a result were able to access support services in a more equitable and effective manner. With improved academic performance, attendance and remediation it was the intent of this initiative that Twelve Pole students involved in extra-curricular activities would also remain academically eligible. This particularly impacted the targeted group of "distance kids" from the Twelve Pole region.

Table 3 revealed the number of school days missed each year over a four year period where bus transportation was not available for the Twelve Pole students: Twelve Pole students missed on average 21 school days a year during the four year time period. Over a four year high school career in grades 9-12, this equated to the equivalent of students missing 84 more school days than their grade level peers that lived closer to school.
### Table 3: Four Year Analysis of School Attended by Twelve Pole Student

<table>
<thead>
<tr>
<th>Year</th>
<th>School Days (Required by WV State Code)</th>
<th>Days Mingo County Cancelled School</th>
<th>Days of School Missed by Twelve Pole Student (due to school closing and lack of transportation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2009</td>
<td>180</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>2009-2010</td>
<td>180</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>2010-2011</td>
<td>180</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>2011-2012</td>
<td>180</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>720</strong></td>
<td><strong>38</strong></td>
<td><strong>84</strong></td>
</tr>
</tbody>
</table>

NOTE: Information provided in this table was retrieved from Tug Valley High School Student Information System as part of West Virginia Educational Information System (WVEIS) December 2012, and Mingo County Transportation records January 2013.

### Monitoring Twelve Pole Distance Initiative

Academic performance data was determined as cumulative Grade Point Average (GPA) data for all content areas in grades 9-12 of the targeted population of students living in the Twelve Pole area. Academic performance data was collected and monitored by the administrative distance initiative team at the end of each (9) week grading period. Attendance data was monitored by the same team at the end of each grading period. Student participation in support services was monitored by the assistant principal. In addition, principals shared Twelve Pole student data on a regular basis in faculty meetings, department meetings and “lunchtime.”
Seeking Solutions to Geographic Injustice

Administrative team meetings. Teachers and advisors were directed to monitor attendance and academic performance of Twelve Pole students in particular on a regular basis including course assessments and participation in support services. Monthly administrative meetings were also scheduled to collectively analyze Twelve Pole student's progress, student needs and the progress of the Twelve Pole Distance Initiative.

**Instruments**

Six survey instruments were used to gather information for this study that included: Student and Teacher Broadband Availability Survey, Student Perception of MODS Effectiveness Survey, Student Perception of OTO Effectiveness Survey, Twelve Pole Student Barriers to Achievement Survey and the combined Teacher Perception of MODS and OTO Effectiveness Survey. Numerous documents were used that included: local census data, WVEIS academic performance data, WVEIS attendance data, athletic eligibility and participation data, participation in support services data, WVEIS drop-out data, and demographic data.

The Students Barrier to Achievement Survey administered to Twelve Pole students was used to access information on obstacles to achievement encountered by the students which hindered their learning opportunities. A second survey determined the broadband and computer accessibility of Tug Valley students. Additional data was gathered on student demographic information using local census data. Survey Monkey was used to assess input from the Twelve Pole students sample group to measure the effectiveness of the MODS and One to One interventions. Survey
Monkey was used to gain information on teacher perceptions and effectiveness of both interventions.

A triangulation of evidence provided information on the impact of distance to the four areas that served as the framework of this study that included academic achievement, attendance, support services and extra curricular participation.

Described in detail below are the instruments used to address the (4) factors impacting distance students in this study.

Academic Performance

The Student Barriers to Achievement Survey instrument was administered to Twelve Pole students in October, 2010. The survey used a Likert scale to rate and rank factors which served as barriers to academic performance for Twelve Pole students. Students ranked the barriers 1-7 with (1) having the most impact to (7) having the least impact. The West Virginia student data reporting system (WVEIS) provided documents on G.P.A. and drop-out data.

Information was compiled each of the four (9) week grading periods over a one and a half year period of this study beginning in the fall of 2011-2012 and the first two nine week grading periods for 2012-2013. Data were collected to assess the sample group of Twelve Pole students’ cumulative grade point averages prior to the implementation of the Twelve Pole Distance Initiative. The students’ cumulative grade reports were tracked starting with the end of year cumulative GPA school year 2009-2010, prior to implementation of the Twelve Pole Distance Initiative (TPDI).
Data thereafter were collected each nine week grading period to monitor student results, ending with the second nine weeks of 2012-2013.

Attendance

Documentation of attendance was retrieved from WVEIS based computer records. Attendance information on the number of days Twelve Pole students were not transported to school while school remained in session was collected from the Tug Valley High School Attendance Records. Students in the Twelve Pole region were not provided transportation on these days as a direct result of impassable rural, treacherous roadways as determined by school administrators and the district transportation director.

Research indicates attendance is a predictor of either success or a predictor of increased drop-out numbers (Orfield, 2004), therefore dropout data were gathered from WVEIS documents. Information on attendance and drop-outs were gathered over a four year period starting 2008-2009 noting the number of students who dropped out of school from the targeted area of Twelve Pole as well as drop-out data compared to Tug Valley whole school data. Additional data retrieved examined Mingo County, Tug Valley, Twelve Pole and state dropout numbers over the same period of time to compare averages.

Support Services

Data were collected on participation in support service programs using the support service participation sign-in sheets collected on Twelve Pole students by the assistant principal each nine week grading period. Documents included Twelve Pole
student participation in support services prior to the implementation of MODS and OTO and one and a half years later. Prior to the initiative, the district offered support services in the form of tutoring and/or remediation after school only. Families in the Twelve Pole area who have no means of personal transportation were unable to take advantage of this service.

**Extra-Curricular Student Survey**

Student information regarding extra-curricular participation was evaluated by the Twelve Pole Student Barrier to Achievement Survey to assess reasons regarding participation in extra-curricular activities. The survey determined interest in participation and barriers to participation in after school activities. Participation data was acquired from the West Virginia Secondary Schools Activities Commission eligibility forms submitted by Tug Valley High School. These forms are used to maintain records including meeting the governing body's eligibility requirements of maintaining a 2.0 GPA for the preceding semester. All student athletes in the state must meet this standard to participate in extra-curricular activities. By assessing eligibility records the participation rate of Twelve Pole students in extra-curricular activities could be concluded. Eligibility records were collected over a four year period. The collection of records was completed by the principal and the researcher of this capstone.

**Combined MODS and OTO Teacher Perception Survey**

The MODS and OTO Teacher Perception Survey was administered to the teachers at Tug Valley High School in the form of a computer generated survey using
SEEKING SOLUTIONS TO GEOGRAPHIC INJUSTICE

Survey Monkey. Its purpose was to ascertain the teachers’ perception of the effectiveness of the MOD intervention program initiated at Tug Valley High School. The teacher perception of the MODS intervention was determined through six questions using a Likert scale rating of: very negative impact, negative impact, no impact, positive impact and very positive impact. Teacher open response comments were also collected.

The student perception surveys on MODS and OTO was administered using the computer generated Survey Monkey. The purpose of the survey was to assess the student perceptions of the MODS and OTO intervention at Tug Valley High School. The students ranked their perceptions on the computer generated program using a Likert scale rating of: very negative impact, negative impact, no impact, positive impact and very positive impact.

Documents Collection

Numerous documents were used that collected data from the following sources: local census data, WVEIS GPA data, WVEIS attendance data, athletic eligibility and participation data, support service participation sign-in sheets, drop-out information, demographic data and district bus transportation reports.

The need for a systemic process to help the students living in the Twelve Pole area was determined and supported by data. The charge set forth by the TPD1 was for the administrative team to work collaboratively with the high school faculty in developing intervention strategies that would create more equitable opportunity for
students to achieve, be present, be involved and participate in support services with a focus on the Twelve Pole distance students.

Limitations

All studies have limitations. Specific limitations to this study include:

1. The sample size was limited in scope: Data was gathered from a small group of participants in one high school in one community within the high school.

2. The sample school is located in one rural, predominately low socio-economic status school district in West Virginia.

3. There was limited diversity of students and teachers in the sample population. Faculty and students were predominately white.

4. Some teachers at Tug Valley High School either retired from the district or transferred to another school in or out of the district during the two and a half years of this study that impacted consistency of data.

5. Initially, teachers were not provided the overall purpose of the study at its onset, limiting their awareness and responsiveness to the initiative goals.

6. The superintendent of the district was not initially included in the planning, process and implementation of the initiative.

7. Time limitations present a problem. Longitudinal data collected over time will show a greater impact of this initiative and the prospects for improved results.

8. Some high school students in the sample group moved in and out of the Twelve Pole area.
9. Information on bus routes not operating on inclement weather days in the Twelve Pole area when other routes were operationally were inconsistently kept.

10. Due to connectivity issues, not all students in the Twelve Pole region had internet connectivity impacting the results of OTO program effectiveness.
CHAPTER FOUR

Results

This capstone study concentrated on investigating the impact of a distance initiative on the student outcomes of academic performance, attendance, participation in support services and extra-curricular activities. At the center of this study was the students living in the Twelve Pole community that attended Tug Valley High School. Results reflect the impact of two and a half years of the development and implementation of activities with the intent of improving student results in the aforementioned areas.

The question guiding this capstone elected to answer was:

Has the development of the Twelve Pole Distance Initiative’s systemic processes of intervention enabled the Twelve Pole area students at Tug Valley High School to improve their academic performance, attendance, ability to receive support services and participation in extra-curricular involvement.

This study was a mixed methods study. Quantitative results presented below included data analyses related to grade point average (GPA) of individual Twelve Pole students, comparative GPA of Twelve Pole students to students who live in closer proximity to the high school and data on, attendance that included dropout data, support services and, extra-curricular eligibility data. Qualitative data gathered provided a deeper understanding of the needs of the distance students and teacher perceptions of what, if any impact the TPDI had in improving outcomes in the four identified areas.
Broadband Availability Results (Students and Teachers)

The Student Broadband Availability Survey issued prior to the implementation of the TPDI created revealed 85% of the 411 students at Tug Valley High school had computers at home. Additional information collected indicated 80% of these students had fast speed internet service at home. Of the twenty eight high school Twelve Pole students, 60% had a computer at home and 30% had fast speed internet access prior to being issued a laptop as a result of this initiative.

Teachers at Tug Valley responded to the broadband survey indicating 95% had a computer at home and 95% noted they had fast speed internet service at the beginning of this study.

Academic Performance Results (Student Surveys)

Student Perception Surveys provided academic performance result data on the students in grades 9-12 living Twelve Pole. Data collected included individual student GPA from June 2010 to January 2013. Of the initial twenty eight students involved in this initiative, 17 of the 28 students demonstrated some improvement in GPA for a 61% increase. In addition fifteen students in the sample group recovered (1) credit from a previously failed course that counted toward graduation.

The GPA of the twenty eight students were compared to Tug Valley students living within a five mile radius to determine any possible discrepancies in distance with regard to cumulative GPA. The GPA for students living closer to the school averaged 2.7 compared to the Twelve Pole students GPA of 1.8. After the implementation of the distance initiative the cumulative grades rose .03%.
Twelve Pole student results on the implementation of OTO revealed 43% of the students see this program as having a positive to very positive impact, 29% indicated it had no impact and 28% indicated this initiative had a negative to very negative impact on improving academic performance.

With regard to the MODS program, survey results indicated 34% of the students stated MODS had a positive to very positive impact on their GPA and academic performance, 38% noted no impact and 29% indicated it had a negative to very negative impact.

Summative student open response comments on MODS and OTO are noted below,

S1: I am beginning to see how MODS can help me. This program allowed me to make up a failing credit. I used to fail all of the time. For the first time this school is doing something that can really help me because I could never have stayed after school for help for tutoring.

S2: I did not feel as far behind as I have in the past because MODS allowed me to work on things I did not understand before the test. Teachers were willing to help me by teaching things another way or by providing time with me to see what it is I did not understand. The OTO program helped me some to keep up with my work when my classmates would have normally gone forward without me and ahead of me on days and buses did not run where I live.

S3: I do not feel like I am as far behind anymore. I never had a computer before until OTO. Now I do not feel like I am different than other kids.
Attendance Results (Student Surveys)

Quantitative data collected on Twelve Pole students indicated over a four year period that Twelve Pole students missed an average of 21 school days a year while school remained in session for all other students. During a four year high school career, Twelve Pole students missed an average of 84 days of school due to buses not running in these remote areas. Over a four year high school career alone, this equated to distance students missing seventeen weeks of school or a little over an entire semester compared to their peers that live closer to school. In essence, over a K-12 school career, Twelve Pole students were graduating with a year and half less of school than their grade level peers, if they graduated. During the implementation of TPDL, student absences for Twelve Pole students were reduced to (0) on inclement weather days as student accessed instruction and completed assignments online from home.

Qualitative data obtained from the student perception survey open response section revealed a summary of Twelve Pole students comments on the impact of distance on attendance.

S1: I live so far from school that sometimes the long bus rides make me just want to stay home. When school first starts in August the buses are hot and smelly. In the winter you freeze.

S2: It was not too bad, or at least it did not seem to be, riding a bus when I was little. As I get older it is not cool to ride a bus when everyone else drives. I find
myself making more excuses to stay home than I did when I was little. I think the long bus rides is a reason.

S3: Why come to school when everything I do, I fail at? I can’t get help if things are offered after school. I can’t be in anything like sports because my parents can’t come and get me.

S4: I must admit I like living way out away from school. When school is called off and buses do not come to my hollar, I get a free day. But, when the snow days become too many for me and the kids in my area, I know that does not help me to keep up with my classes or the other students in my graduating. I know it hurt my grades.

S5: I get what teachers are trying to do in having us attend tutoring during the day in the MODS program. If you are getting a failing grade in something, the teachers automatically schedule you into these classes. I know it is to help me but I do not like being forced into a tutoring elective. However, I must admit, I am starting to not want to miss school as much as I did before MODS because in coming to school I can regain lost credits in MODS.

S6: I liked the One to One option best. Teachers gave a lot more assignments where I could use my technology skills. I also was able to do assignments from home when the buses did not come to my hollar. In the past I would get further behind. Now I tend to keep up with things a little better.

S7: Some teachers are boring. Using the OTO options was better for me. I liked being able to use the computer at home too. Until we were given a computer to
use, my family did not have one at home. I liked how we could do assignments online. I was able to make up a credit through OTO. This program helped me with my attendance and credits.

A correlation exists between high absenteeism and dropout statistics. Below are data that represented a four year analysis of dropout statistics in the state, district, school and for Twelve Pole students. Drop-out data of Twelve Pole students over a four year period indicated an average of 20 students from this remote area became a drop-out statistic. The average dropout data during the two years of implementation of TPDI, for Twelve Pole was reduced to 4. As noted in Table 3, the number of dropouts in the Twelve Pole area per year ranged from 18, 21, 6 and 2 in a four year time span with six and two being the most recent dropout numbers.

Table 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Tug Valley Student Population</th>
<th>Twelve Pole Student Population</th>
<th>Twelve Pole Student Dropout Rate (%) From TVHS</th>
<th>TVHS Dropout Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-09</td>
<td>380</td>
<td>45</td>
<td>18</td>
<td>40%</td>
</tr>
<tr>
<td>2009-10</td>
<td>401</td>
<td>40</td>
<td>21</td>
<td>53%</td>
</tr>
<tr>
<td>2010-11</td>
<td>409</td>
<td>30</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>2011-12</td>
<td>424</td>
<td>30</td>
<td>2</td>
<td>6%</td>
</tr>
</tbody>
</table>

Note: Information provided in this table was retrieved from WVEIS (West Virginia Education Information System) August 2012.
Support Services Results (Student Surveys)

Data on Twelve Pole student attendance in support services indicated an increase in attendance as a result of TPDI. Prior to the initiative, distance students' participation in after school tutoring was non-existent as they lacked the means of getting back home from school following these sessions. Data collected from after-school tutoring services indicated no Twelve Pole students attended these sessions prior to TPDI. After the implementation of MODS, 100% of the Twelve Pole students attended these remediation opportunities that were designed and implemented during the school day. With regard to days when buses did not run to the Twelve Pole area, the OTO program enabled these students to use the laptop computers from home issued through OTO initiative that enabled students to complete the assignments. This option provided a means of uninterrupted learning. Twelve Pole students were counted as present in school provided assignments were completed on these snow days where transportation was not available to students in Twelve Pole. Teachers monitored electronic assignments.

Six open response questions provided comments from students on the benefits of the two support services offered referred to as OTO and MODS.

**Question 1:** What impact does Tug Valley High School’s One to One and MODS have on your academic performance?

S1: The effort teachers have made this last year or so to help those of us who live so far away has made me want to do better in school.
S2: I don't think I would have stayed in school without the extra help given by my teachers through MODS and OTO.

S3: The laptops are so cool and have helped me, even my mom is thinking now about getting her GED.

S4: I knew I always needed help but I couldn't stay after school. MODS let's me get help before I leave school. On snow days, the computers the school gave me helps me to stay up with my homework. I never knew how to get information off of a computer before because we could not afford one. I didn't really think I would be able to finish high school when I was in the 9th grade. Maybe I can go to college now.

S5: I don't hate school as much as I used to. If I get my grades up, I want to play football next year.

S6: I still hate having to ride the bus so long and I hate getting up so early. I'm always tired.

S7: I liked how the teachers scheduled support services during the day. Not that I really want to have an extra period where I have to do more work...but these classes do help me in understanding things that I would otherwise go home with homework in that I do not understand. I for one would not be able to stay afterschool as my parents can't come get me.

Extra-Curricular Participation and Eligibility Results (Student Surveys)

Data collected over a four year period from academic eligibility form documents indicated less than 3% of the students from Twelve Pole participated in after school extra-curricular activities compared to 30% of the remaining Tug Valley
population. Survey results indicated 43% of the Twelve Pole students would have liked to participate more but transportation created barriers to being involved.

Eligibility records four years prior to TPDI indicated that 3% of the Twelve Pole students who did participate in extra-curricular activities were academically ineligible to play at one time or another in a given season. After the implementation of TPDI, the number of students academically ineligible in a season showed no change.

Results from the student survey open response section on extra-curricular participation included comments below.

S1: Now I can make grades for football.
S2: I can now play a whole season of basketball.

Academic Performance Results (Teacher Survey)

Results indicated 87% of the teachers at Tug Valley High School stated MODS had a positive impact on students GPA and academic performance.

Additional results indicated 83% of the teachers stated OTO had a positive impact on student GPA and academic performance.

Attendance Results (Teacher Survey)

Teacher comments on the Teacher Perception Survey provided data on the impact of MODS and OTO on student attendance. Teachers noted that all students were able to attend MODS regardless of where the student lived. Teachers indicated they learned from the OTO process that teachers needed to better monitor the Twelve Pole student snow day electronic postings. If students are to be counted as present on
snow days, teachers needed to accurately log and give credit to students completing work from home. Teachers needed to develop a means of student accountability.

T1: OTO may have provided a avenue for kids to be more successful. Some data is beginning to show that supports more kids want to come to school because they can make up lost credits during the MODS program automatically scheduled during school hours.

T2: I think kids are beginning to feel more successful because of the internetion program developed called MODS. That program seems to create a better atmosphere for learning. At first the kids resented having to be scheduled into MODS. Once they got used to these sessions and are beginning to see the benefits, there seems to be more student buy in.

T3: OTO provided our students access to a computer that would have never had a computer at home. These students are now excited about what all they can learn from a computer and lessons they can access from a computer. Students comment this option is better preparing them for college if they want to go or jobs that require computer skills.

Support Services Results (Teacher Survey)

Support services data collected from the teachers indicated 87% of the teachers answered “yes” MODS has made a positive impact on assisting Twelve Pole students who otherwise were not receiving support services. The teachers survey results show 65% answered “yes” that OTO has made a positive impact on distance students ability to receive support services at Tug Valley High School.
**Question 1:** Have “MODS” been effective in gaining access to support services and allowing students to take advantage of remediation services at Tug Valley High School?

T1: MODS have enabled us to offer support services for students who have not otherwise attended support sessions after school.

T2: MODS has helped a number of students make up work and get a credit for prior failing grades. This has resulted in fewer failures at the end of the year and more students graduating than they would have had MODS not been in place.

**Question 2:** What are the strengths of “MODS”? 

T1: MODS gives students an opportunity to improve their grades and understand classroom content in a smaller learning community.

T2: MODS increased student grades and allowed for less failures. MODS also gives teachers a chance to see where students are and what they are lacking to help bridge the gap.

T3: MODS provides flexible intervention opportunities, constant monitoring of student progress and is beneficial to our students. The program still has some bugs to be worked out but I think we are on to something here. Some student data seems to be moving in a positive direction. I think things will get better as we get a few more years under our belt.

**Question 3:** What are the strengths of “OTO”?

T1: OTO is an opportunity long overdue for our students.
T2: OTO is a tool to even the field of education for many students. For our Twelve Pole kids it has created an equal opportunity.

T3: The technology aspect of this program has created a new interest in our school on the part of parents. There is a newfound desire to find out what is going on at the school and a feeling from parents that the school cares. Parents were really appreciative of the free computers offered in OTO.

**Question 4: Have MODS been effective with academics?**

T1: Yes, the positives include credit support, student progress, recovery of failed courses and it has improved the schools’ dropout rate and graduation rate.

T2: MODS helped students who might not have the opportunity to complete credit recovery after school because we do not provide transportation from after school tutoring. Also, as students are headed in the wrong direction and toward failing, the during the day MODS sessions provided the support and intervention needed to prevent the student from failing.

T3: I know MODS have decreased failures for my classes in particular.

**Question 5: Has the school’s OTO program been effective with academics?**

T4: Very much so. Students are provided a research and informational tool that many would not have had access to that did not have computers at home.

T5: Yes, some students find it easier to be organized with the computer. It allows students who are absent from school to participate in classes by way of Thinkfin.
T6: Students are more engaged in the learning process as a result of the computers.

T7: The new approach with the apps allows for new instructional strategies and increases student engagement.

T8: OTO helps students access information they would have no way to access. The OTO in itself teaches students skills essential to modern technology.

T9: The use of OTO has provided the Twelve Pole students an opportunity that has never before been available. Certainly, OTO has changed academics for these children.

Extra-curricular Results (Teacher Surveys)

The teachers results show 78% responded “yes”. MODS provided a means to increase participation for the Twelve Pole students by improving opportunities to improve grades and meet extra-curricular eligibility standards. The results were less for OTO. The findings revealed 52% teachers concluded OTO was effective in assisting the Twelve Pole students in meeting extra-curricular eligibility requirements.

Summary

A great deal of evidence was produced in surveys and documents that assisted in the formation, implementation and results of the TPDI. This data provided information to the four categories of grade point average, attendance, support services and extra-curricular participation that served as the framework pillars of this capstone
in creating equal opportunities for the students of Twelve Pole in Tug Valley High School.

The triangulation of information from multiple surveys and numerous documents provided evidence that supports the problems associated with distance from school and helped in monitoring the systemic processes developed during the TPDI.

Findings from surveys, open response comments and archival documents revealed that school leaders created the vision for TPDI that involved a guiding coalition of leaders. These leaders developed the TPDI and shared the vision with community representatives and teachers. The TPDI became an initiative to address the inequalities of living in a remote area and greater distances from school. Results indicated collaborative efforts among school, community and district leaders helped the school connect students to intervention strategies and assisted in creating a learning organization at Tug Valley High School.

The findings from this study will be further discussed in Chapter 5 of the capstone.
CHAPTER FIVE

Conclusions, Actions, and Implications

Chapter five provided the findings from the Twelve Pole Distance initiative and its impact on academic performance, attendance and participation in support services and extra-curricular activities.

Broadband Internet Findings

The challenge continues to exist in providing computers and monitoring fast speed internet availability to students, particularly the Twelve Pole students and in monitoring the quality of student work from the intervention options such as MODS and OTO. Although a great portion of the students and faculty had computers and internet service at home, alternative options had to be available to those who lacked these opportunities. As the study progressed it was noted that more teachers had less fast speed service than noted at the beginning of the study. Teachers commented that during these difficult economic times, many families elected to drop the added expense of this service. This negatively impacted teacher perceptions of the OTO option. Teachers commented they were in favor of this option but dropping their personal home service posed a challenge to accessing student work from home. In addition, no home internet service resulted in longer school days for teachers as teachers tried to access and grade electronic student work before they left school in the afternoon or teachers commented they arrived earlier in the day to access things from their school computer work stations. This study concluded therefore that options requiring computer accessibility need to continue to be analyzed regularly to
examine if these options are available to all students and all teachers. If they are not
not a viable options to all, they create further injustice to identified populations.

Academic Performance Findings (Students)

Preliminary quantitative data from this study concluded no significant increase
in overall/cumulative academic performance of Twelve Pole students. However, the
fact that (15) Twelve Pole students recovered at least (1) credit as a result of TPDI
provides promising results. Recovering failed courses that would have resulted in
failing grades being changed to passing grades contributed to the fewer failing grades
and ensured a greater number of students being on track to graduate from high school.

Attendance Findings (Students)

Attendance increases were a direct result of TPDI. Students in the Twelve
Pole region no longer posted as high a number of unexcused absences as a result of
OTO option therefore allowing these identified students to continue with lessons from
home when buses did not run in their remote area.

Support Services Findings (Students)

Findings for support service participation showed a dramatic increase.
Because interventions were provided during the school day, no longer an option to
attend, or an after school option, all Twelve Pole students in need of credit recovery
or remediation were scheduled into MODS. Success breeds success. As more
students are able to address academic deficiencies in a timely manner through the
scheduled interventions, preliminary data though small is promising, indicating that
academic performance data will increase over time. The findings on student credit recovery indicated less course failures and should improve graduate rates.

**Extra-curricular Participation and Eligibility Findings (Students)**

Although the challenge still exists in providing more opportunities for distance students to participate in extra-curricular activities, the TPDI did provide an option for improved grades, credit recovery and attendance that allowed the Twelve Pole student to remain academically eligible to play. Because of MODS in particular, participating Twelve Pole students were able to get immediate help during these interventions scheduled during the school day.

**Academic Performance Findings (Teachers)**

Teachers are seeing the benefits of a unified focus on distance students in particular as a result of the Twelve Pole Distance Initiative. Although minimal at this time, teachers are beginning to see improved academic results. Teachers gained consensus that the computer availability should include all students and not just the Twelve Pole students. As a result of this study, the MODS and OTO impacted all students at Tug Valley High School in a positive manner.

**Attendance Findings (Teachers)**

Teachers believe the school and community must work together to prepare the Tug Valley students to be 21st Century learners. As a result of OTO on Twelve Pole students, teachers are now asking more questions about on-line learning for all students. Learning should not stop on snow days or when buses do not run to the
district's remote areas. Teachers are now engaging in more discussion on how to expand the TPDI to prepare all high school students for college and online learning.

Support Services Findings (Teachers)

The most glaring finding occurred in support services. Teachers realized how many students in Tug Valley High School needed help but could not stay after school, particularly distance students. In providing the MODS sessions during the day, teachers now see the benefits of being able to offer immediate help to students who lack remedial support at home. Teachers as a result of TPDI now more deeply examine the programs the high school has in place that they thought were helping students like after-school tutoring. Teachers now realize for students who lack transportation some programs may not be viable options at all. Teachers are analyzing if the option is creating an opportunity for a more just learning environment or adding to the problem.

Extra Curricular Participation and Eligibility (Teachers)

Findings revealed OTO to be less of an option in providing an opportunity to improve grades to maintain eligibility mainly as a result of the barriers of students and the lack of access fast-speed internet access. These interventions provided a means to help students remain eligible to play. These options did not increase extra-curricular participation. The school continues to look for avenues to allow more distance students to be afforded the opportunity to be involved in extra-curricular activities. As the TPDI continues, the leadership team seeks answers to increased club and intramural involvement during the day and possibly before school for
students who arrive early to allow them to be more connected and involved in school activities.

**Actions**

As a result of the Twelve Pole Distance Initiative, Tug Valley High School has started to look more intentionally at the results of students who live great distances from school who often have long bus rides and the impact this has on student success. The faculty and staff are now more aware of obstacles these identified students face and the powerful impact these factors have on student outcomes that can ultimately impact state accountability scores. No matter how small these students are in number, the needs of these distance students must be addressed to create a more equitable and just learning environment for them. Although too late to impact the decision to consolidate or not in the Mingo County School District, this study has proven to construct an awareness of the influences when creating larger high schools and the impact of lengthening bus rides from home to school for many students. In the future, as a result of this study, school board members and school leaders will be better informed when given the task to possibly close smaller community schools that increase bus ride time for students that negatively impacts academic performance, attendance and participation in support services and extracurricular activities.

In addition, teachers are now less likely to blame parents as being less caring or Twelve Pole students as the problem when distance students underperform, do not
get involved; or do not attend free intervention support services. Teachers now own
the problem and are working collaboratively to find solutions to help these students.

Community partners such as the local internet providers are now working with
the school system to minimize barriers to connectivity in various regions where
students live within the district. Because of this study, the local business community
is more aware of the skills needed and technological applications necessary for 21\textsuperscript{st}
Century learning. A more unified effort now exists between the schools and the
private sector to prepare students for the online learning options they will face in the
work force, at the high school and at the university level in this technological era we
live in.

Implications

The following are suggestions for future research and studies on the impact of
distance from home to school on student outcomes.

1. Examine the impact of a similar distance initiative on an entire school system,
K-12. Does distance impact high school students more than elementary and
middle schools students or vice-versa?

2. Continue with this study as it evolves into a longitudinal study. What impact
will this initiative have on the Twelve Pole community students 5 years down
the road?

3. Pre-test and post test teacher perceptions before and after an intervention is
implement. This would provide comparative improvement data.
4. A further examination of distance and its impact could provide additional data on what impact distance has on students from various socio-economic backgrounds? Does longer distances from home to school also negatively effect students who are not from poverty?

Summary

Reflection on the gathered documentation motivated Tug Valley High School to establish a committee entrusted with developing a shared vision with an intentional focus on students living in the Twelve Pole community in an attempt to help create a more just and equitable learning environment. The issues are prominent in many rural high schools throughout America a need for solutions are necessary for impacted students. The fact that the faculty and school leaders have elected to continue with this longitudinal study and provide suggestions for improvement indicates this initiative changed the thinking of teachers in Tug Valley High School. The systemic processes developed in these early stages of the implementation of the Twelve Pole Distance Initiative indicate positive student and school outcome results are in progress.

In conclusion, the Twelve Pole Distance Initiative systemic processes of intervention answered the one research question of this study. Yes, the TPDI enabled the Twelve Pole area students at Tug Valley High School to improve student outcomes.
Appendix 1A: Twelve Pole Student Barriers to Achievement Survey?

Please rank in order from 1 being the most to 7 being the least which barrier creates Difficulty to you in terms of learning at TVHS.

---------Early Start Time of School
---------Distance to the Vocational School
---------No home internet service
---------Distance from home to school
---------Missing too much school
---------The length of my school day is too long
---------I feel like I am always behind in school

How does distance from school have an effect on your education at TVHS?

How does distance from school have an effect on your attendance at TVHS?

How does distance from school have an effect on receiving school assistance at TVHS?

How does distance from school effect your decision to participate in extra curricular activities at TVHS?
Appendix 2A: Student Survey for Broadband Accessibility Survey?

1. What grade are you in at TVHS?
2. What area of the attendance zone do you call home?
3. Do you have internet access at home?
4. What type of internet access do you have at home?
Appendix 3A: Teacher Broadband Availability Survey

1. Do you have a computer at home?

2. What type of high speed internet access do you have at home?
Appendix 4A: Student Perception of MODS Effectiveness Survey

1. What impact do MODS have on your academic performance?

2. How have MODS been effective with each of the following items?
   a. Academics (Helping you make better grades)
   b. Attendance
   c. Gaining Support Services (taking advantage of remediation services)
   d. Helping you to be eligible for extra curricular activities

3. In your opinion what is the strong point of MODS?

4. In your opinion what is the weak point of MODS?
Appendix 5A: Student Perception of One to One Effectiveness Survey?

1. What impact has OTO have on your academic performance?

2. How has OTO been effective with each of the following items?
   a. Academics (Helping you make better grades)
   b. Attendance
   c. Gaining Support Services (taking advantage of remediation services)
   d. Helping you to be eligible for extra curricular activities

3. In your opinion what is the strong point of OTO?

4. In your opinion what is the weak point of OTO?
Appendix 6A: Teacher Perception of MODS and OTO Effectiveness Survey?

1. What impact do you think MODS have on student learning?
2. What impact do you think the OTO program has had on student learning?
3. Have MODS been effective with student academic progress?
4. Has the OTO been effective with student academic progress?
5. Have MODS been effective for students to gain access to support services?
6. Has OTO been effective for students to gain access to support services?
7. What impact has MODS produced on student attendance?
8. What impact has OTO produced on student attendance?
9. What impact has MODS produced in increasing student eligibility for extracurricular activities?
10. What impact has OTO produced in increasing student eligibility for extracurricular activities?
11. Please respond in writing to your thoughts on the interventions of MODS and OTO introduced at TVHS?
Appendix 7A: Student Documentation for Attendance-MODS Credit Recovery

**SAMPLE FORM:**

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