

**An Analysis of Rural North Carolina Superintendents' Views Regarding the Presence of
Future Ready Graduate Attributes within the Instructional Environment**

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Research type: Quantitative

Research Priority Area: Teacher Education and School-Based Ag. Education

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The purpose of this research study was to determine the extent to which future ready graduate attributes are found within the instructional environment of North Carolina's rural public-school districts, as perceived by their respective superintendents. In relation to the teacher awareness of future ready graduate attributes, it was recognized by Superintendents that teachers appeared to be aware of the majority of the attributes, with the only exception being the attribute of multi-lingual being found to have limited awareness by teachers. Regarding teachers' reinforcement of the future ready graduate attributes in the instructional environment, the attributes of multi-lingual, health-focused life-long learner, and self-directed responsible worker, were noted to be reinforced "to a limited extent". Superintendents ascertained that students displayed limited awareness of the future ready attributes of multi-lingual, financial literate citizen, and being a self-directed responsible worker.

Introduction

The guiding vision of the North Carolina State Board of Education (2016) stated "every public-school student will graduate from high school globally engaged and prepared for work and postsecondary education, in order to be a productive citizen." In addition, the previous mission statement similarly noted "every public-school student will graduate from high school, globally competitive for work and postsecondary education, and prepared for life in the 21st Century" (North Carolina State Board of Education, 2006). With 80 of North Carolina's 100 counties considered to be rural, which is defined as having 250 people per square mile or less, the majority of the state's school systems or local education agencies (LEA), geographically reside in these areas (The Rural Center, 2014). Thus, the aforementioned mission statements have major implications for education in rural North Carolina. Fourteen of the remaining counties are considered to be regional city/suburban counties (population densities between 250 – 750 people per square mile) and six counties classified as urban (population densities between 750 - 1,933 people per square mile) (The Rural Center, 2014).

American Rural Education Overview

According to the National Association of State Boards of Education (2015) one-third of the United States' approximately 100,000 public school districts are in rural regions. These schools collectively serve nearly 12 million students, roughly a quarter of all-American students. The racial and ethnic diversity of students in rural schools is on the rise, with 26.7 percent of all rural public-school students coming from a minority group. A large number of students in this group currently lives below the poverty line throughout the country. The overall complexity of culture and demographic diversity within rural schools today will require expanded public understanding and policy attention. Many challenges and aspects shape the backdrop of rural schools such as persistent poverty, diversity, multiple cultural identities, and isolation that is often due to geography, culture, and lack of broadband. Further, rural schools are faced with the mounting requirements to address new educational reforms and administrative tasks as are urban schools; although, with more limited staff and overall resources.

Currently, rural schools do have more access to technology than in the past, which allows students access to courses not geographically available in their respective locality. However, there are still major disparities that exist in rural schools in relation to technology access (National Association of State Boards of Education, 2015). Marre' (2014) indicated that in surveys taken by the U.S. Census Bureau between the years 2008 -2012, the segment of the rural working-age population (ages 25-64), with a college degree or higher was 14 percentage points lower as compared to urban areas. The aforementioned assessment also included a section of the adult population with a 4-year degree being two percentage points higher when considering the rural-urban gap. The concept of educational attainment, an indicator of the stock of human capital in a community or region, remains a great factor affecting the growth and prosperity of local economies in both rural and urban areas (Marre', 2014). According to Marre' (2014) American rural communities are experiencing a declining younger population, with its young educated population opting for more affluent suburban and urban areas, where opportunities abound and social outlets are available. One aspect that has been cited to address the educational gap in rural communities is the enhancement of rural community colleges and distance learning opportunities (Marre', 2014).

North Carolina Rural Education Overview

The future success of North Carolina and in particular rural North Carolina will be directly tied to the success and reinvestment of its young people in their respective communities (N.C. Rural Economic Development Center, 2011). Overall, low educational attainment has been one major issue facing rural economic development (Marre', 2014). According to the (North Carolina Rural Economic Development Center, 2013) there was a time when North Carolinians could obtain good jobs to support a family without the completion of high school, but with changes in North Carolina's industrial and economic profile over the past twenty years, this is no longer a possibility. This possibility of employment security without advanced training is disappearing quickly from the landscape. The economy of today demands an education beyond high school. Rural North Carolina can only build this future economy if the state has an adequately trained workforce. Surveys are showing that today's rural North Carolina students are increasingly seeing the value of obtaining an education post high-school (The Rural Center, 2015). In 2011, 84 percent of rural high-school seniors in North Carolina planned to pursue some type of formal education beyond high school, with another five percent planning to enter the military (N.C. Rural Economic Development Center, 2011). However, the challenge still remains that many of these students are living in communities with a low-tax base and resulting in lack of support for the educational system. Moreover, many parents within these communities lack the educational background to assist their children with pursuing educational aspirations or the understanding of what it entails to achieve higher education and other career training opportunities (The Rural Center, 2015).

According to The Rural Center (2015) the educational attainment of rural North Carolina adults has improved at a steady pace since 2000 with just 18 percent of rural North Carolinians over the age of 25 having less than a high school diploma, and 32 percent possessing a high school diploma, in comparison to 34 percent of adults in regional city/suburban counties having a high school diploma; and 31 percent in urban counties. With regard to higher education, 18

percent of rural North Carolina adults have a bachelor's or advanced degree; with 32 percent having either an associate degree or some college experience (Rural Center, 2015). North Carolina ranks near the top in comparison to other states in terms of the largest rural enrollments, with only Texas surpassing North Carolina. In 13 states nearly one-third of all students were enrolled in rural school districts, with North Carolina topping the list in 2013 (Johnson, Showalter, Klein, and Lester, 2014). Additionally, North Carolina is classified as a state where more than one third of the rural students are students of color (Johnson, Showalter, Klein, and Lester, 2014). The states of Texas, North Carolina, and Georgia, with the largest rural minority enrollments, service one-third of all rural minority students in the United States. With regard to English language learners (ELL), 18 states have ELL rates above the national average in the following descending order: New Mexico, Alaska, Washington, Oregon, Texas, Nevada, Idaho, North Carolina, Florida, Colorado, Arizona, Utah, Delaware, South Carolina, Wyoming, South Dakota, Montana and Arkansas (Johnson, Showalter, Klein, and Lester, 2014).

With regard to the state of education in rural North Carolina, since 2006, rural high school graduation rates have improved nearly 20 percent (The North Carolina Rural Economic Development Center, 2013). Overall this brings the four-year rural graduation rate to 78 percent and puts rural students on even ground with their urban counterparts. Interestingly, the highest graduation rates are in rural counties. The greatest urban graduation rate in 2011, Orange County, was 86 percent, with six rural counties experiencing higher rates. In contrast, the high school graduation rates were below 70 percent in eight rural counties, with no urban counties reporting numbers lower than 70 percent (The North Carolina Rural Economic Development Center, 2013).

Theoretical Framework

Human Capital Theory

Scholars differ on how human capital is defined. Goode (1959) defined human capital as the knowledge, skills, attitudes, aptitudes, and required traits contributing to overall production. Van Loo and Rocco (2004) indicated human capital should be considered an investment in human resources for employees to possess the necessary "skills and knowledge" (p. 99), while Swanson (2001) defined human capital as an investment in people. Both Van Loo and Rocco and Swanson indicate that this investment is often used to enhance knowledge and skills of employees in hopes of increasing worker output. The economist Gary Becker introduced the human capital theory in 1962. In his book, *Human Capital* (1993), Becker stated that "education and training are the most important investments in human capital" (p. 17).

Bowles, Gintis, and Osborne (2001) stated that human skills represent individual capacities contributing to production as an argument in the production function. Blundell, Dearden, Meghir, and Sianesi (1999), found that there are two main components of human capital that are highly correlated: early ability (whether acquired or innate) and skills acquired through formal education or training on the job. It is important to note that human capital greatly differs from other assets, essentially because it yields market returns only in proportion to the worker's supply of labor (Hall and Johnson, 1980). According to Becker (1993), the human capital theory is the most influential economic theory of western education.

Expert Oriented Model Theory

The Expertise-Oriented approach relies primarily on professional expertise to judge the quality of an institution, program, product or activity (Fitzpatrick, Sanders, & Worthen, 2011). Some professional judgment is involved in all evaluation approaches, but the expertise-oriented approach uses the reliance on professional expertise as the primary evaluation strategy. A professional or expert would be someone who can offer the most knowledge needed to evaluate the program, institution, or agency. The expertise-oriented approaches to evaluation have emphasized the central role of expert judgment, experience, and human wisdom in the evaluative process and have focused attention on such important issues as whose standards (and what degree of transparency) should be used in rendering judgments about programs (Fitzpatrick, Sanders, & Worthen, 2011). This study relied on the input of North Carolina Public School Superintendents in rural areas, to provide their expert opinions in relation to the study objectives.

SCANS Report

The Department of Labor conducted a study, in May of 1990 to gauge how well schools prepared young people for the work force (Secretary's Commission on Achieving Necessary Skills, 1991). This was a historic event in that it was the first time American businesses were given a voice to clearly state to educators what students needed to know to be successful in the workplace. A major goal of the report was to present the necessary functional and enabling skills that society must offer to every child by age 16 (Secretary's Commission on Achieving Necessary Skills, 1991). The SCANS report consisted of a three-part foundation component and five workplace competencies. The three foundation skills were Basic Skills (Reading, Writing, Arithmetic/Mathematics, Listening, Speaking), Thinking Skills (Creative Thinking, Decision-Making, Problem Solving, Seeing Things in the Mind's Eye, Knowing How to Learn, Reasoning), and Personal Qualities (Responsibility, Self-Esteem, Sociability, Self-Management, Integrity/Honesty).

Also, the report provided five competencies that effective workers must acquire: (1) Resources (Time, Money, Materials and Facilities, Human Resources); (2) Interpersonal skills (Participate as a Member of a Team, Teach Others New Skills, Serve Clients/Customers, Exercise Leadership, Negotiate, Work with Diversity); (3) Information Management (Acquire and Evaluate Information, Organize and Evaluate Information, Interpret and Communicate Information, and Use computers to Process Information); (4) Systems (Understand Systems, Monitor and Correct Performance, Improve or Design System); and (5) Technology (Select Technology, Apply Technology, and Maintain and Troubleshoot Equipment). All of the aforementioned competencies cited in the report are foundational competencies that are directly embedded within the Future Ready Graduate Attributes being analyzed for this study. The skills sets identified within the SCANS Report are skill sets that are seen as fundamental foundational tools needed for success in all work venues, and thus have high applicability for workplace success in the 21st Century global society.

Future Ready Graduate Attributes

In order to prepare students for life and work in the 21st Century Economy, the North Carolina State Board of Education in the mid 2000's adopted the Partnership for 21st Century Learning Framework (2017), which in their mission states that it was founded to "serve as a catalyst for 21st century learning to build collaborative partnerships among education, business, community and government leaders so that a learners acquire the knowledge and skills they need to thrive in a world where chance is constant and learning never stops." To provide more specific guidance and clarity The North Carolina State Board of Education adopted the following seventeen attributes as characteristics that a future ready graduate should possess: Science Savvy, Effective Problem Solver, Strong Team Contributor, Critical Thinker, Financially Literate Citizen, Literate Consumer of Media, Curious Researcher, Capable Technology User, Creative/Innovative Thinker, Proficient Reader, Effective Communicator, Self-Directed Responsible Worker, Skilled Mathematician, Relationship Builder, Knowledgeable Global Citizen, Health-Focused Life-Long Learner, and Multi-Lingual (North Carolina Principals and Assistant Principals Association, 2016).

Superintendents of the public-school districts are ultimately responsible for ensuring the aforementioned mission statements are achieved; however, no current research has been conducted to examine how superintendents perceive their respective rural LEA is performing in preparing students with the Future Ready Graduate Attributes, as adopted by the North Carolina State Board of Education. Given this, the researchers of this investigation, sought to achieve the goal of determining the North Carolina rural superintendents' views regarding Future Ready Graduate Attribute preparation within their LEA.

Purpose and Research Questions

The purpose of this research study was to determine the extent to which Future Ready graduate attributes are found within the instructional environment of North Carolina's rural public-school districts, as perceived by their respective superintendents. The following research questions provided the overall foundation of this respective study:

1. What are the perceptions of North Carolina rural public-school superintendents in relation to what extent teachers in their respective LEA are aware of Future Ready Graduate Attributes?
2. What are the perceptions of North Carolina rural public-school superintendents in relation to what extent teachers in their respective LEA reinforce Future Ready Graduate Attributes within their daily instructional environment?
3. What are the perceptions of North Carolina rural public-school superintendents in relation to what extent students in their respective LEA display Future Ready Graduate Attributes?

Methodology

The population for this descriptive survey research study consisted of 100 of the 115 North Carolina Public School Superintendents. The 100 Superintendents were selected from districts that are considered to be rural. For this study, an original survey was created adapted by the study researchers and modified from studies conducted by Graham (2001), and Alston,

Cromartie, Warren-English, and Wakefield (2009). The survey instrument consisted of four sections: Section I. Teachers Awareness of Future Ready Graduate Attributes, Section II. Teachers Reinforcement of Future Ready Graduate Attributes in Daily Instruction, Section III. Student Demonstration of Future Ready Graduate Attributes, and Section IV. General Demographic Information. This manuscript focused on data from the first three sections of the survey. Sections I – III consisted of the 17 Future Ready Graduate Attributes as adapted by the North Carolina State Board of Education in 2007. For each characteristic, respondents selected one response from a five-point summated scale (i.e. Likert-type) with the following responses: Not At All = 1.00 – 1.49, To a Limited Extent = 1.50 – 2.49, To An Acceptable Extent = 2.50 – 3.49, To a Great Extent = 3.50 - 4.00.

The validity of the instrument was established by means of content and face validity. Brown (1983) defined content validity as “the degree to which items on a test representatively sample the underlying content domain” (p. 487). Brown recommended using expert judges as one means of establishing content validity. The panel of experts consisted of faculty within the school administration graduate program at the principal investigator’s respective institution, who have experience in training upper level public school executives. All faculty were tenured that served on the expert judges panel. Face validity was established with the aid of a panel of experts in the area of teacher education and administration. In order to establish the reliability of the survey instrument, a pilot test was conducted with a combination of superintendents not included in the final survey population in addition to some principals for a total of twenty individuals. Chronbach’s alpha was used as the reliability measure for this study. For this study it was determined that measures of at least .85 were considered satisfactory, after a review of literature in some other areas of social science research (Schmidt & Hunter, 1996). Chronbach’s alpha reliability coefficients for the survey were as follow: Section One = 0.92, Section Two = 0.91, and Section Three = 0.89. No adjustments were made to the survey as result of the reliability analysis.

A three-round web-based questionnaire was used for this study. Elements of Dillman, Smyth, and Christian’s (2009) Tailored Design Method were utilized to achieve an optimal return rate, given its wide usage in social science research, and proven methodology. An initial letter informing the potential respondents that they would be receiving an invitation by email with a link to the study survey was sent approximately two weeks before the survey email was sent. By the end of one week, 20 surveys had been received. After week one had passed a reminder email was sent and by the end of week two, 11 more responses had been received. A final email was sent, yielding seven more surveys. The final response rate was 38% (N = 38). Given the size of the population, researchers deemed this response rate acceptable (Fan & Yan, 2010; Lance, Butts, & Michels, 2006). In order to control for non-response error Lindner, Murphy, and Briers (2001) and recommended comparing early to late respondents. Research has shown that late respondents are often similar to non-respondents. For this study early was defined as respondents within the first week of the survey, with late being defined as any responses received after this point. No significant differences were found in this study among the seventeen total variables that were analyzed.

Findings

Table 1 presents the perceptions of respondents with regard to the extent to which they believe teachers are aware of Future Ready Graduate Attributes. With regard to the attributes of Proficient Reader, Capable Technology User, Effective Problem Solver, Effective Communicator, Critical Thinker, Creative/Innovative Thinker respondents indicated that teachers were aware of them to an acceptable extent. Moreover, the attributes of Strong Team Builder, Self-Directed Responsible Worker, Skilled Mathematician, Relationship Builder, Science Savvy, Literate Consumer of Media, Health-Focused Life-Long Learner were found to be at an acceptable level, as related to teacher awareness of them. Pertaining to the awareness of teachers regarding the attributes of Effective Communicator, Self-Directed Responsible Worker, Skilled Mathematician, Relationship Builder, Knowledgeable Global Citizen, and Health-Focused Life-Long Learner, all were found to be to an acceptable extent. Other variables found to be acceptable were Knowledgeable Global Citizen, Curious Researcher, and Financial Literate Citizen. In contrast to the aforementioned attribute findings, the teachers' awareness level regarding the attribute Multi-Lingual was judged to be to a limited extent.

Table 1
Teacher Awareness of Future Ready Graduate Attributes

Characteristics	NAA (f)	TALE (f)	TAAE (f)	TAGE (f)	Mean
1. Proficient Reader	0	2	16	20	3.47
2. Capable Technology User	0	5	14	19	3.37
3. Effective Problem Solver	0	4	18	16	3.32
4. Effective Communicator	0	5	20	13	3.21
5. Critical Thinker	0	8	16	14	3.16
6. Creative/Innovative Thinker	0	9	16	13	3.11
7. Strong Team Builder	0	10	15	13	3.08
8. Self-Directed Responsible Worker	1	5	22	10	3.08
9. Skilled Mathematician	1	10	17	10	2.95
10. Relationship Builder	1	9	19	9	2.95
11. Science Savvy	0	12	17	9	2.92
12. Literate Consumer of Media	1	10	21	6	2.84
13. Health-Focused Life-Long Learner	1	11	19	7	2.84
14. Knowledgeable Global Citizen	1	11	21	5	2.79
15. Curious Researcher	1	16	17	4	2.63
16. Financial Literate Citizen	2	16	18	2	2.53
17. Multi-Lingual	8	18	11	1	2.13

Scale: Not at All (1) = NAA, To a Limited Extent (2) = TALE, To an Acceptable Extent (3) = TAAE, To a Great Extent (4) = TAGE

Table 2 presents the perceptions of respondents concerning the extent to which they believe teachers reinforce the Future Ready Graduate Attributes, within the daily instructional environment. With regard to the attributes of Capable Technology User, Proficient Reader, Effective Problem Solver, Effective Communicator, and Critical Thinker respondents indicated that teachers reinforced them to an acceptable extent. Moreover, the attributes of Creative/Innovative Thinker, Strong Team Builder, Relationship Builder, Skilled Mathematician, and Literate Consumer of Media were found to be at an acceptable level, as related to teacher's reinforcement of them within the instructional environment. Pertaining to the teachers' reinforcement of the following attributes in the instructional environment: Curious Researcher, Science Savvy, and Knowledgeable Global Citizen were found to be to an acceptable extent. In contrast to the aforementioned findings, respondents indicated that teachers only reinforce the following attributes to a limited extent within the daily instructional environment: Financial Literate Citizen, Health-Focused Life-Long Learner, Self-Directed Responsible Worker, and Multi-Lingual.

Table 2
Teacher Reinforcement of Future Ready Graduate Attributes in the Instructional Environment

Characteristics	NAA (f)	TALE (f)	TAAE (f)	TAGE (f)	Mean
1. Capable Technology User	1	3	16	18	3.32
2. Proficient Reader	0	4	16	16	3.29
3. Effective Problem Solver	0	5	24	9	3.12
4. Effective Communicator	0	7	19	12	3.09
5. Critical Thinker	0	8	20	10	3.06
6. Creative/Innovative Thinker	1	7	17	13	3.06
7. Strong Team Builder	1	8	19	10	3.00
8. Relationship Builder	1	10	17	10	2.94
9. Skilled Mathematician	0	14	15	9	2.91
10. Literate Consumer of Media	0	11	22	5	2.82
11. Curious Researcher	1	12	19	6	2.82
12. Science Savvy	1	11	22	4	2.74
13. Knowledgeable Global Citizen	3	11	18	6	2.73
14. Financial Literate Citizen	2	20	12	2	2.41
15. Health-Focused Life-Long Learner	0	14	19	5	2.29
16. Multi-Lingual	7	16	14	1	2.21
17. Self-Directed Responsible Worker	0	7	18	13	2.12

Scale: Not at All (1) = NAA, To a Limited Extent (2) = TALE, To an Acceptable Extent (3) = TAAE, To a Great Extent (4) = TAGE

Table 3 presents the perceptions of respondents with regard to the extent to which they believe students display the Future Ready Graduate Attributes. With regard to the attributes of Capable Technology User, Proficient Reader, Creative/Innovative Thinker, Effective Problem Solver, and Strong Team Builder respondents indicated that students' display of the attributes was to an acceptable extent. Moreover, the attributes of Relationship Builder, Critical Thinker, Literate Consumer of Media, Curious Researcher, and Effective Communicator were found to be displayed at an acceptable level. The students' display of the following attributes: Science Savvy, Knowledgeable Global Citizen, and Health-Focused Life-Long Learner were found to be to an acceptable extent. In contrast to the aforementioned findings, respondents indicated that student's display of the following attributes was to a limited extent: Financial Literate Citizen, Self-Directed Responsible Worker, and Multi-Lingual.

Table 3
Students' Display of Future Ready Graduate Attributes

Characteristics	NAA (f)	TALE (f)	TAAE (f)	TAGE (f)	Mean
1. Capable Technology User	0	2	17	19	3.44
2. Proficient Reader	0	5	24	9	3.03
3. Creative/Innovative Thinker	0	10	17	11	2.97
4. Effective Problem Solver	0	13	20	5	2.84
5. Strong Team Builder	0	12	22	4	2.84
6. Skilled Mathematician	0	15	16	7	2.84
7. Relationship Builder	0	16	15	7	2.81
8. Critical Thinker	0	14	20	4	2.78
9. Literate Consumer of Media	0	15	18	5	2.78
10. Curious Researcher	0	16	17	5	2.75
11. Effective Communicator	0	16	17	5	2.75
12. Science Savvy	0	15	20	3	2.72
13. Knowledgeable Global Citizen	1	19	15	3	2.53
14. Health-Focused Life-Long Learner	0	22	13	3	2.50
15. Self-Directed Responsible Worker	0	17	17	4	2.49
16. Financial Literate Citizen	0	26	11	1	2.31
17. Multi-Lingual	5	22	11	0	2.10

Scale: Not At All (1) = NAA, To A Limited Extent (2) = TALE, To an Acceptable Extent (3) = TAAE, To A Great Extent (4) = TAGE

Conclusion

In relation to the teacher awareness of Future Ready Graduate Attributes, superintendents perceived teachers appeared to be aware of the majority of the attributes, with the only exception being the attribute of Multi-Lingual. Regarding teachers' reinforcement of Future Ready

Graduate Attributes in the instructional environment, the attributes of Multi-Lingual, Health-Focused Life- Long Learner, and Self-Directed Responsible Worker, were perceived to be reinforced to a limited extent. With respect to students display of Future Ready Graduate Attributes the following were perceived to be displayed to a limited extent: Multi-Lingual, Financial Literate Citizen, and Self-Directed Responsible Worker. The Human Capital Theory emphasizes that human capital is the knowledge, skills, attitudes, aptitudes, and required traits contributing to overall production (Goode, 1959). It appears that superintendents perceived that the total Human Capital function is not being developed within the students being served, by the respective school districts. Moreover, the attributes contained within the framework of the Partnership for 21st Century Learning Framework (2017) and endorsed by the North Carolina State Board of Education are not being fully addressed.

The findings on Multi-Lingual attribute are concerning when considering Hornberger (2009) who indicated that in the 21st Century world constructs such as ethnolinguistic diversity and inequality, intercultural communication and contact, and global political and economic interdependence, are major realities of today's world, and for the most part put pressures on the public educational systems. According to the United Nations (2012) multi-lingual education approaches are imperative for the preparation of 21st Century students and professionals. With the increasing diversity of rural and urban communities, it is imperative that schools prepare students with multi-lingual capabilities.

According to Tobin (2000) some of the major foundational elements in effective work systems are self-correcting, self-managing, self-accountable, self-governing behavior, all of which are elements of self-directed learning. Self-directed learning has become increasingly relevant in today's complex workplace where both leaders and employees must assume personal responsibility for their learning. The skill of Self-directed learning within a workplace can encourage employees to actively cooperate with their colleagues, in order to tackle complex and real problems (Webster-Wright, 2009).

The Organization For Economic Co-Operation and Development (2006) indicated that financial education is increasingly important, not just for investors, but for the public at large. Moreover, the inclusion of financial literacy with public school systems, is an essential too needed for life long financial stability and success. Financial Literacy is increasingly becoming imperative for the average family trying to decide how to balance budgets, purchase a home, fund college education, and plan for future retirements.

The National Scientific Council on the Developing Child (2010) indicates that a vital and productive society, with a prosperous future is tied directly to the early and continuing health of its young people. Establishing healthy habits is the foundation for a lifetime of sustained well-being. Within rural areas, where there is disproportionate presence of chronic diseases, the initiation of healthy habits and its inclusion in public schools is imperative.

Implications and Recommendations

Nationally there is difference between school officials' views of the college readiness of students and student performance. School officials estimate that just 63% of their graduating

seniors nationally will be sufficiently prepared for college-level coursework without the need for remediation, and moreover that 51% will graduate from college (MetLife, 2011). It has also been found that only 25% of high school graduates who took the ACT in 2012 were ready for college-level work (ACT, 2012). With regard to student preparation there is agreement that students today embarking upon the workforce must exhibit the same kind of high proficiency in academic knowledge and skills as those entering the university (ACT, 2006; Alliance for Excellent Education, 2009; Educational Policy Improvement Center, 2009). According to ACT (2009) teachers at the both the secondary and postsecondary levels believe that the skills and knowledge required for college readiness and career readiness overlap to a great extent.

According to the United States Department of Agriculture (2017) there is a clear link between education and economic outcomes for rural people and their localities. Overall rural Americans are becoming increasingly educated, however these gains vary greatly across demographic groups. Rural women are outpacing rural men in terms of education attainment, with educational attainment among rural whites being higher than that of other racial and ethnic minorities in rural regions (United States Department of Agriculture, 2017). When comparing rural against urban areas, rural areas are still falling behind urban areas in terms of the portion of adults with college degrees. Given the findings of this study, it is imperative that North Carolina's rural school districts prepare students with the requisite knowledge, skills, and dispositions needed for success in today's highly competitive workplace and life in the global society as whole.

Based upon the conclusions and implications from this study, two major recommendations have resulted from this study. The first recommendation is to provide teachers with professional development as related to emphasizing Future Ready Graduate attributes in daily instruction such as Multi-Lingual, Health-Focused Life- Long Learner, and Self-Directed Responsible Worker, in order for them to be reinforced within daily instruction, across curricula. Lastly it is recommended to increase the emphasis on the Future Ready Graduate attributes of Multi-Lingual, Financial Literate Citizen, and Self-Directed Responsible Worker, through effective pedagogical methods. Given the aforesaid statements, effective pedagogical methodologies are critically important in order to better equip Rural North Carolina's public-school students for future workplace success and life overall.

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