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LEVELS OF A COLLEGE-GOING CULTURE IN SELECTED WEST VIRGINIA HIGH SCHOOLS AS PERCEIVED BY TEACHERS AND COUNSELORS

A dissertation submitted to
the Graduate College of
Marshall University

In partial fulfillment of the
requirements for the degree of
Doctor of Education

in

Curriculum and Instruction

by
Keri Ferro

Submitted to
Dr. Ron Childress, Committee Chairperson
Dr. Louis Watts
Dr. Edna Meisel
Dr. Sue Hollandsworth

Marshall University
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Table of Contents

List of Tables

Abstract

This study examined the level of school college-going culture as perceived by teachers and counselors in selected West Virginia high schools. This study also investigated the differences in the level of implementation of a school's college-going culture based on selected independent variables. Finally, the study investigated the relationship between the level of college going culture and the school college enrollment rate as reported by the West Virginia Higher Education Policy Commission. A quantitative research design was used to study a population of high school teachers and counselors from 36 West Virginia high schools. The high schools with 18 highest and 18 lowest college enrollment rates averaged from the graduating classes of 2009, 2010, 2011 and 2012 were selected using college-going data from the West Virginia Higher Education Policy Commission. A researcher developed survey based on the Nine Principles of a College-going Culture Theory by McDonough (1997) was used to collect data from educators.

Study findings indicated that teachers and counselors described their perception of the level of college-going culture in their school to be sometimes true to usually true. Statistically significant differences were found between teachers and counselors for four of the nine principles and the total. Overall, counselors reported higher levels than teachers. Although some statistically significant differences were found in high- and low-performing schools based on the attributes selected for a few of the nine sub-categories and total, all but one had no effect on perceived levels of college-going culture. Finally, this study also found there is no relationship between college enrollment rate and perceived levels of college-going culture in high- or low-performing schools.

Chapter One: Introduction

A well-educated workforce is necessary to grow and strengthen our economy. With more education, an individual increases his or her marketability and likelihood of obtaining a lucrative career. A college graduate can expect to earn over one million dollars more during his or her working life than a high school graduate (Cheeseman-Day & Newburger, 2002). The Bureau of Labor Statistics provides these data (2011):

- a person with an advanced degree (master's, professional, or doctorate) earns an average of $1,493 per week;
- a person with a bachelor's degree earns an average of $1,053 a week;
- a person with some college, no degree, earns an average of $719 a week; and
- a person with only a high school diploma earns an average of $638 a week.

Therefore, individuals with only a high school diploma miss out on approximately $415 per week and $21,580 per year compared to someone with a college degree.

Education is important in order to gain access to all economic and social opportunities in the United States. However, 30% of students entering high school drop out before graduation (Greene & Forster, 2003). Dannete & Hancock (2007) found that high-achieving, low-income students attend college at a rate of 77%, while similarly, low-achieving, high-income students attend college at a rate of 78%; indicating socio-economic status played a role in who continued with postsecondary education and who did not. According to baseline results from the National Education Longitudinal Study of 2002, 72% of 2002 10^{th} graders surveyed planned to finish college (Ingels, Burns, Chen, Cataldi,& Charleston, 2005). In the 2006 follow-up of the study, two years after the students were to graduate high school, 70% had enrolled in a postsecondary

institution; 43% were enrolled in a 4-year college and 27% in a 2-year college. However, of those 2002 10th graders that attended postsecondary education Whites attended at higher rates than Black, Hispanic and Latino students. Approximately 75% of all White graduates, 50% of all Black students, and 58% of all Hispanic or Latino students enrolled in a postsecondary institution by 2006.

Family income and parents' education also seemed to play role in postsecondary enrollment. Students in the co-hort with a family income of $100,000 or more enrolled in a 4-year or 2-year institution at a rate of 90% while only 52% of those from families with an income of $20,000 or less enrolled. Similarly, 87% of students whose parents had a graduate/professional degree enrolled in postsecondary education while only 53% of students whose parents completed high school or less did so (Bozick & Lauff, 2007).

Lastly, the single most consistent predictor that students took the steps to apply and enroll in college was when teachers reported that their high schools had a strong college climate (Roderick, Nagaoka, Coca, & Moeller, 2008). The authors found that students who attended high school where their teachers were highly involved in supporting students in the college application process, they were more likely to not only apply but enroll in a four-year institution. These teachers also reported working hard to ensure students were prepared for college work and they pushed students to go to college. Furthermore, Roderick et al. (2008) reported that the biggest difference for lower level students was attending a school with a strong college climate.

History of College Access, Enrollment, and Readiness

Before World War II, only 20% of high school graduates went on to college (Thelin, 1996). Since limited financial aid was available, only students from upper- and upper-middle

class families attended college. Although women were able to attend college beginning in the 1770's, white males from affluent families constituted the majority of the college student population throughout most of the 20th century (Thelin, 1996). Therefore, the question of college readiness was not as important as that of college choice (Kinzie, Palmer, Hayek, Jacob, Hossler, & Cummings, 2004). Therefore, college choice set the tone for one's life path and was seen as one of the most important decisions a family could make. This was especially true for women as college was seen as a place to meet a husband (Kinzie, et al., 2004).

After World War II, the GI Bill provided veterans free tuition, books, a monthly allowance, and college credit for wartime experience. Around the same time, the United Negro College Fund began financially supporting historically black colleges and universities (Kinzie, et. al., 2004). Kinzie et al. (2004) point out that these initiatives contributed to increased college enrollment in the late forties; over two million students attended 1,800 two and four-year institutions. However, since only 20% of high school graduates were expected to enroll in college, there was a lack of information and consistency in college application processes and the alignment of high school and college curricula. Standardized tests, such as the ACT and SAT, began to be more widely used to measure students' college readiness and address these inconsistencies (Kinzie, et. al., 2004).

By the mid-1950's, college admissions requirements became more systematic nationwide. These requirements included all or some combination of the following: a high school diploma, aptitude test scores, high school rank, interviews, minimum number of courses in core subjects, and recommendations (Kinzie, et. al., 2004). Until the 1960s, guidance counselors were mostly involved in vocational counseling and students relied on parents and relatives for college information (Kinzie, et. al., 2004).

There were many changes in college access and enrollment during the late 1960s (Kinzie, et. al., 2004). Many colleges and universities became coeducational and more financial aid became available, increasing access to African American and low-income students. During the mid-1970s and 1980s, financial aid came predominately in the form of student loans rather than scholarships and grants. Colleges also began more sophisticated marketing strategies and increased recruitment efforts of low-income and minority students. These trends continued through the 1990's (Kinzie, et. al., 2004).

Current College Access, Enrollment, and Readiness

Unfortunately, the United States has a low and inequitable high school graduation rate and, of those who do graduate, many choose not to continue with postsecondary education (Greene and Forster, 2003). Examining high school graduation rates and college readiness, Green and Forster found that only 70% of all public high school students graduate and of that 70% only 32% leave high school prepared for college. The National Center for Education Statistics (2011) supported Greene and Forster's findings and suggested high school graduation rates have remained relatively stable since 2001 and that college-going rates have also remained stable since 2001, ranging from 62-69% through 2008. Additionally, Green & Winters (2005) noted that about one-third of students who enter high school leave with the coursework to meet college entrance requirements. For example, in 2002, only 23% of Black students, 20% of Hispanic students, and 40% of White students graduated with the skills and courses necessary to enter a four-year college.

Based on a statistical analysis by Parsed and Lewis (2003), the U.S. Department of Education reported that in the fall of 2000, 42% of students enrolling in public two-year colleges enrolled in remedial classes, and 20% of students in public four-year colleges enrolled in

remedial classes. Unfortunately, according to a report by Complete College America (2012), enrollment in remedial courses increased to 51.7% for students at 2-year colleges and remained fairly steady at 19.9% for students at 4-year colleges. ACT, Inc. (2012), reported the following statistics for 2012 ACT tested graduates who met their college readiness benchmarks (minimum score needed on each subject test indicating a 50% chance of earning a B and 75% chance of earning a C in the corresponding college course): English, 67%; math, 46%; reading, 52%; science, 31%; and overall, 25%.

The good news is these numbers are up by one to two percentage points from the 2005 report, except English, which fell one percent, and have remained relatively stable since 2007 (ACT, Inc., 2012). This may mean, however, that there are more students who are not college ready than only those enrolled in remedial courses. Therefore, it is imperative that colleges and high schools communicate and align standards and expectations so students can be prepared for college-level work. Conley (2003) found that most states' standards-based high school tests are not aligned with postsecondary learning. He argued that high schools that focus on preparing students to pass state tests do not even consider how to prepare them for postsecondary success.

In November 2009, the US Department of Education released the final Race to the Top guidelines (US Department of Education, 2010). This historic $4 billion program awarded money to states that are leading the way in comprehensive state level education reform. The focus is on adopting rigorous standards and assessments, forming a comprehensive data system that drives instruction, creating highly effective principals and teachers, and turning around low-achieving schools (US Department of Education, 2010). In November of 2012, the Department released the 61 finalists for the Race to the Top-District competition that will provide almost $400 million dollars to local school districts (US Department of Education, 2012). The

applicants were asked to develop plans to personalize and deepen student learning, directly improve student achievement and educator effectiveness, close achievement gaps, and prepare every student for success in college and careers (US Department of Education, 2012). In order to do this, schools must be aware of college enrollment and remediation rates.

Raising college enrollment rates calls for equal access to "college knowledge" for all students, not just the ones expected to attend college (McDonough, 1991, 1997, 2002). Every student should feel that college is an option and have support from the entire school staff in navigating the process. Schools must raise awareness of postsecondary options and clearly connect the high school experience to future success (McDonough, 1991, 1997, 2002).

According to McDonough (1997) increasing college enrollment and college proficiency is not an easy job; it takes a change in the culture of the school. Whether they feel they produce college and career ready graduates or not, the entire school community must focus on creating a college-going culture to achieve this goal. A college-going culture sets the expectation that all students will go on to a postsecondary education (McDonough, n.d.).

School Culture

Culture influences everything that happens in a school. Willard Waller (1932) argued that every school definitely has a culture of its own, with complex rituals and a set of folkways; a moral code that shapes all behavior and relationships. Schien (2004) suggested all schools develop a distinct personality as people deal with tragedy, solve problems, and celebrate. As people go about their day, they often take for granted these expectations; in short, school culture is the way things are done around here.

Deal and Peterson (2002) noted that school culture sharpens the focus on what is important and valued. Culture affects motivation which in turn affects productivity and enhances effectiveness. Teachers and students are more likely to succeed when the culture includes high expectations, fosters hard work, is dedicated to the school mission, and focuses on learning for all students. The willingness of the faculty, students, and parents to put time into continuous improvement is affected by culture; therefore the key to success depends on the type of culture created (Deal & Peterson, 2002).

Renchler (1992) found there was a positive correlation between school culture, student motivation, and student achievement. Furthermore, Bandura (1993) stated that faculty efficacy to promote learning had a greater impact on student achievement than socioeconomic status. Deal and Peterson (1999) suggested it is easier to motivate student learning if the school culture expects, respects, and rewards student achievement and the motivation to learn. McClafferty, McDonough, & Nunez (2002) emphasize the importance of transforming the school culture so that all students are able to reach their educational aspirations through realistic, attainable goals. These researchers concur that a strong school culture could be the best way to improve student achievement which one could infer may improve graduation rates and allow the option for more students to attend college.

Studies on school effects have examined the critical issues within and between high schools that influence students' postsecondary plans (Alwin & Otto, 1977; McDonough, 1997). Boyle (1966) asserts that middle-class students attending working-class schools have lower college aspirations than other middle-class students. Furthermore, the author found this effect is true in the opposite direction as well, where working-class students attending a predominately

middle-class school have higher college aspirations. This literature indicates that the type of high schools students attend are a good predicator of college attendance.

Although schools are largely measured on student outcomes (Ravitch, 2010), Oakes (1989) suggested creating a system that included measures for school context. Access to knowledge, press for achievement, and professional teaching conditions were the three indicators she argued provided measures of school context. Conley's (2009) model included college readiness indicators that emerged from literature and can be most directly influenced by schools: key cognitive strategies, key content, academic behaviors, and contextual skills and awareness. Falsey & Heyns (1984) found school context played a role in the differences in college attendance for private and public high school students. School culture, organizational policies, staff orientations, and college counseling and resources accounted for the higher college attendance rates of private school students.

Theoretical Framework

Since school culture influences behaviors and beliefs, the role schools play in facilitating students' success, access to, and enrollment in postsecondary education can be best identified by examining school culture (McClafferty, McDonough, & Nunez, 2002; McDonough, 1997; and Schein, 2004). Patricia McDonough has done extensive work in high school counseling, college access, and organizational culture (McClafferty, et. al., 2002; McDonough, 1997, 1998, 1999, 2002; McDonough, Ventresca, & Outcalt, 2000). Nine principles of a college-going culture theory have emerged from her work. These principles have been incorporated into McClafferty, McDonough, & Nunez's (2002) comprehensive model used in a four year partnership between UCLA and a group of urban K-12 schools. Their model outlines the conditions necessary to create a school environment where college is an option for all students.

McDonough's (n.d.) framework for creating a college-going culture includes nine principles that have a direct influence on college preparation and enrollment. Components of the college-going culture theory are designed to help schools and students overcome the barriers to college readiness, access, and enrollment outlined in the literature (McClafferty, McDonough, & Nunez, 2002). McDonough's nine principles will provide the theoretical framework for this study.

Problem Statement

High-achieving, low-income students attend college at about the same rate as low-achieving, high-income students, 77% and 78% respectively (Dannette & Hancock, 2007). Often, academically qualified low-income students do not enroll in postsecondary education because of lack of planning and support, knowledge of options, and financial barriers (Luna De La Rosa & Tierney, 2006; McClafferty, McDonough, & Nunez, 2002). Schools in low-income urban and rural areas are more likely to have inadequate resources for college counseling (College Board, 2008). For example, on average, counselors in private schools spend half of their time on college counseling, while public school counselors spend a quarter of their time in this manner (College Board, 2008). Despite the research indicating the importance of low-income and minority students' need to receive in-depth college counseling, the student-counselor ratio remains extremely high with the national average being 459 to 1 (American School Counselor Association, 2012).

A school's culture has a strong impact on students' aspirations and achievement (Hahn & Price, 2008; Chait & Venezia, 2009). There is a body of research that indicates early planning and access to college knowledge is essential; the idea of college must be fostered and encouraged (College Board, 2006; Luna De La Rosa & Tierney, 2006; McClafferty, McDonough, & Nunez,

2002; Venezia, Kirst, & Antonio, 2003.). Low-income, minority, and rural students are often overwhelmed by the process of navigating the college application process. Many of these students are first-generation college students and lack the support at home to successfully navigate their postsecondary plan (College Board, 2006; Luna De La Rosa & Tierney, 2006; McClafferty, McDonough, & Nunez, 2002; Venezia et al., 2003.).

While the need for improvement in education is widely-acknowledged, information regarding the degree to which a school culture affects the postsecondary success of students is limited. Therefore, this study investigated the level of college-going culture in selected high-performing and low-performing West Virginia high schools. Secondarily, the study sought to determine if there are differences in the level of college-going culture in selected high and low performing high schools based on selected demographic/attribute variables. Thirdly, the study investigated the relationship between the level of college-going culture and postsecondary enrollment rates in selected high-performing and low-performing West Virginia high schools. Finally, the study provided an assessment of the validity of McDonough's Model of college-going culture.

Research Questions

The following research questions were investigated:

1. What is the level of school college-going culture as perceived by counselors and teachers in selected low and high performing West Virginia high schools?
2. What are the differences, if any, in the level of school college-going culture in selected low and high performing high schools based on total years teaching

experience, total years teaching at current school, school enrollment, percent needy students enrolled, and access to rigorous curriculum?

3. What is the relationship, if any, between the level of school college-going culture and college enrollment rate in selected low and high performing high schools?

Operational Definition

Total Level of college-going culture – the level of college-going culture as self-reported by teachers and counselors on the survey instrument, *Nine Principles of College-going Culture Assessment*, using a seven point scale (1=Rarely True, 4=Sometimes True, 7=Usually True); the total individual score was calculated by summing the responses to each of the 42 prompts in Part B of the Nine Principles of College-going Culture Assessment**.**

Level of college-going culture for subscale scores for: College Talk, Clear Expectations, Information and Resources, Comprehensive Counseling, Testing and Curriculum. Faculty Involvement, Family Involvement, College Partnerships, and Articulation - the level of college-going culture as self-reported by teachers and counselors on the survey instrument, *Nine Principles of College-going Culture Assessment*, using a seven point scale (1=Rarely True, 4=Sometimes True, 7=Usually True); the individual subscale scores were calculated by summing the responses of the 3-5 questions specific to each subscale.

High-performing schools – West Virginia high schools with the 18 top college-going rates averaged over four years, 2009-2012, as reported by the West Virginia Higher Education Policy Commission

Low-performing schools – West Virginia high schools with the 18 lowest college-going rates averaged over four years, 2009-2012, as reported by the West Virginia Higher Education Policy Commission

School enrollment – number of students enrolled in a particular school in the fall of 2013 as reported by the West Virginia Department of Education

Access to rigorous curriculum – Percent of students enrolled in AP courses which is calculated using seat count, in a selected high school, enrolled in AP courses as reported on the West Virginia Department of Education website 2011-12 report card data.

Percent needy – percentage of economically disadvantaged students, in a selected high school, as reported on the WVEIS website 2013-14 data, http://wveis.k12.wv.us.

College-enrollment rate – average percentage of students from each selected high school who enrolled in a two or four year postsecondary institution from 2009-2012 as reported by the West Virginia Higher Education Policy Commission.

Significance

Examinations of schools' college-going culture have largely taken place in urban, west coast areas; there have been few, if any, studies conducted in rural areas. This study on college-going culture will examine mostly rural schools in West Virginia and will contribute to the body of knowledge regarding college access and matriculation. For those schools that participate, this study will offer insight into the level of college-going culture in their school community. These high school principals could use the information from this study to make building level changes that may increase their students' enrollment in postsecondary education. Other stakeholders could gain insight on what role they can play in helping effect postsecondary aspirations and

opportunities for students in their community. Postsecondary institutions could use this information to help local high schools fill their gaps in the college knowledge of their counselors, teachers, parents, and community members.

Delimitations

This study is limited to selected, suburban and rural high schools in West Virginia and may not be generalizible to populations outside of this state. The survey population consisted of high school teachers and counselors from the 18 lowest and 18 highest performing high schools in terms of college-going rate.

Chapter Two: Review of the Literature

Postsecondary education is critical to compete in our global economy, According to researchers at the Georgetown University Center on Education and the Workforce (2010), jobs requiring at least some postsecondary education increased from 25 million in 1973 to 91 million in 2007. Unemployment rates are lower for those with some postsecondary education (Kena, Aud, Johnson, Wang, Zhang, Rathbun, Wilkinson-Flicker, & Kristapovich, 2014). In May 2013, the national average unemployment rate for college graduates was only 7.0% as compared to 17.5% of high school graduates (Kena et al., 2014). On average, income levels increase as levels of education increase. The Bureau of Labor Statistics (2013) reports that a person with a bachelor's degree earns almost double that of a person with only a high school diploma. In fact college graduates earned 19% more than those with only a high school diploma in 1980. By 1999 that gap had increased to more than 58% (United States Department of Education, 2003).

Higher salaries and lower unemployment rates illustrate the significance of postsecondary education for an individual; however, there are also economic benefits for society (Baum, Ma, & Payea, 2010). Federal, state, and local governments benefit from the increased tax revenue and decreased dependence on government financial assistance programs. A well-educated workforce is more likely to receive health insurance and retirement savings options from their employer. College graduates also tend to be more engaged citizens, live healthier lifestyles, and experience an overall improved quality of life (Baum, Ma, & Payea, 2010).

College and Postsecondary Readiness

The concept of college and postsecondary readiness is a heavily scrutinized topic in educational research and policy change (ACT, 2012, Alliance for Excellence in Education, 2011,

Conley, 2007, and WestEd, 2010). The Bill and Melinda Gates Foundation (2009) defined college readiness as high school graduates that are equipped with the skills and knowledge necessary to be successful in higher education. Multiple definitions of postsecondary readiness offer substantive differences, ranging from preparing students for life after high school to specifically being ready for college. For example, postsecondary readiness was defined by Pinkus (2009) as making the high school diploma a true indicator of college and work readiness.

Conley (2007) defined college-readiness as "the level of preparation a student needs in order to enroll and succeed – without remediation – in credit-bearing general educational courses at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 5). Conley (2007, 2009) also outlined four key areas necessary for college readiness. These four concentric levels of college readiness, knowledge, and skills are those that can be most influenced by schools directly. The four dimensions are:

1. Content Knowledge – mastery in content knowledge including math, science, social studies, English, and writing;
2. Cognitive Strategies – skills in problem solving, reasoning, research, interpretation;
3. Academic Behaviors – time management, study skills, and realistic self-monitoring of academic level; and
4. Contextual Skills and Awareness – "college knowledge" or knowledge of the college application process including college fit, financial aid, and college level academic expectations.

Conley (2008) argued that these dimensions are interconnected and must be identified and measured to ensure more students are college-ready. Similarly, Achieve, Inc. (2004) identified

content knowledge and basic skills, core academic skills, non-cognitive skills and college knowledge as the indicators of student readiness for college.

Successful college students are academically prepared (Tierney, 2005). Therefore, the types and quality of courses taken in high school are an indicator of student readiness for content knowledge and core academic skills. A rigorous, quality curriculum is the best predictor for college completion (Adelman, 1999). Such a curriculum is critical because it offers students the opportunity to take courses that will not only prepare them for school but ensure they are eligible to attend college (Oakes, 2003). Cognitive knowledge or core academic skills include analytical thinking and critical reading and writing. These skills, often mentioned as the weakest area of preparation in high school, are probably the most highly valued skills in college. Conley (2008) argues these skills have the largest gap when transitioning from high school to college.

These first two sets of skills are generally recognized as college readiness skills but the skills in the last two groups also shape how prepared students are for college. Academic behaviors or non-cognitive skills include self-awareness, self- control, time management, study skills, and social problem-solving (Conley, 2007). In order for students to successfully tackle their new environment, these types of social skills and problem-solving skills are necessary (Nagaoka, Roderick, & Coca, 2009). Lastly, college knowledge changes gears from cognitive and non-cognitive skills and recognizes the role of social capital in college access and success. College knowledge includes having the information, resources, and skills that allow students to successfully navigate the college application process. Minority, low-income, and first generation students face many obstacles when applying to college often due to the lack of college knowledge – financial aid deadlines, range of options within the system, and navigation of the complex processes and systems (Roderick et al., 2008).

MacCarthy and Kuh (2006) report that more than 90% of high school seniors that took the High School Survey of Student Engagement indicated that they intended on going to college. However, these same students also reported they did not engage in educational activities that prepared them for college. These activities include taking math after their junior year, studying more than three hours per week, and writing five plus page papers. The survey also found high school seniors did not put a lot of effort into school work but still made A's and B's – they weren't challenged (MacCarthy & Kuh, 2006).

Green and Forster (2003) found students' lack of preparedness for postsecondary education was a stonger factor when deciding whether to continue with higher education, rather than the inadequate financial support or lack of affirmative action policies at the postsecondary institution. A 2008 report from the Institute for Higher Education Policy (IHEP) found academic preparation distinguished college-goers from non-college-goers (Hahn & Price, 2008). The study focused on students who were college qualified but did not enroll in college. They found 48% of non-college-goers reported a high school GPA between 2.5 and 2.9, while only 12% of college-goers fell in that range; this indicated that almost half of those that did not enroll for college were unprepared. Greene and Forster's study, supporting the IHEP report, found that many public high school graduates with high GPAs, high achievement scores, and good class ranking chose not to apply for college (Hahn & Price, 2008).

According to the National Center for Education Statistics (2011), the national high school graduation rate has improved from 75.5% in 2008-09 to 78.2% in 2009-10. However, examining high school graduation rates and college readiness, Green and Forster (2003) found that of the approximately 70% of all public high school students that graduate only 32% leave high school ready for college. The Southern Regional Education Board reported in 2010 that

60% of the high school graduates that enroll in postsecondary institutions require some type of remediation. In an analysis of data from the National Education Longitudinal Study, Goldberger (as cited in Chait & Venezia, 2009) found 21% of low-income high school graduates are adequately prepared for college, compared to 54% of middle and high-income graduates. Additionally, Green & Winters (2005) point out that only about one-third of students who enter high school leave with the coursework to meet college entrance requirements.

Assessments and Readiness

Of the 2013 ACT test takers, only 26% met al.l four college readiness benchmarks indicating that 74% of test takers were not adequately prepared for freshman level college courses in one or more of the following: English, Algebra, and Biology (ACT, 2013). The ACT readiness benchmarks were developed by comparing students' scores on the subject-area tests with their grades in credit-bearing first year college courses. Although college entrance exams compare standardized test scores to college outcomes, these exams may be poor indicators of college readiness. Unless the ACT is used as the state's accountability test, the students that choose to take the exam have already decided they are going to college. Therefore, maybe state and national assessments would be better indicators of college readiness (Roderick et al., 2009).

The Center on Education Policy (2007) reports that only six states indicate the purpose of high school exit exams is to measure postsecondary readiness. Moreover, since students often need many chances to pass the exit exam, students begin taking them as early as 10^{th} grade, indicating standards may be lowered and are more likely aligned with 10^{th} grade work vs. 12^{th} grade. There is little evidence that exit exams could be used to measure college readiness. Jacob (2001) suggests that exit exams with higher standards will increase the dropout rate instead of increasing college readiness.

High schoolers take state mandated tests, exit exams, college entrance exams, college placements tests, and more. College bound students in California can take more than 20 standardized tests, not including regular classroom exams, beginning in high school lasting through graduation (Venezia et al., 2003). Adding to the pressure and confusion, the format, content, and standards can vary significantly from test to test. Therefore, students are confused about the purpose of the test and often just take them without knowing what they are measuring. Students also reported feeling overwhelmed by the burden of so much high stakes testing (Venezia et al., 2003).

Based on a statistical analysis by Parsed and Lewis (2003), the U.S. Department of Education reported that in the fall of 2000, 42% of students enrolling in public two-year colleges enrolled in remedial classes, and 20% of students in public four-year colleges enrolled in remedial classes. In the fall of 2006 enrollment in remedial courses increased to 51.7% for students at 2-year colleges, and remained fairly steady at 19.9% for students at 4-year colleges (Complete College America, 2012). These data indicate the possibility of misalignment of high school standards, graduation requirements, and high school assessments with expectations of postsecondary institutions.

Conley (2003) found that most state's standards-based high school tests are not aligned with postsecondary learning. He argues that high schools that prepare students to pass state tests do not even consider how to prepare them for postsecondary success. His study examined how well state assessments measure college readiness. The study found that high school assessments from 20 states were either somewhat or poorly aligned with college readiness standards. Therefore, Conley recommends state assessments be modified to become better indicators of postsecondary readiness.

Similarly, research by Achieve (2008) concluded most high school tests only measure the knowledge and skills necessary for high school rather than measuring more advanced skills valued by postsecondary institutions and employers. Therefore, they too argue that it is imperative that corporations, colleges, and high schools communicate aligning standards and expectations so students can be prepared for careers and college-level work.

College Knowledge

Equal access to college knowledge is a fundamental part of a college-going culture. However, equal access to college preparatory courses is also a critical element (McDonough, 2004). In order for students to be ready for all postsecondary educational opportunities, schools must offer academically rigorous courses taught by highly qualified teachers. A high school diploma is no longer sufficient; therefore, the focus has shifted to assuring graduates leave high school with the skills and knowledge essential for success in college or the workforce (McDonough, 2004).

According to McDonough (2005), "college plans do not simply just happen. They must be fostered and encouraged through a school's culture and the counselor is key to this development of culture." Counselors impact students' aspirations, college knowledge, and academic choices. Despite the research indicating the importance of low-income and minority students' need in receiving in-depth college counseling, the student-counselor ratio remains extremely high with the national average being 459 to 1 (American School Counselor Association, 2012). Counselors often do not begin talking to students about their postsecondary options until their junior or senior year. By beginning the conversations so late, student options are limited if they have not taken the required coursework, are not academically prepared, need

to make decisions about the best fit college, and are only beginning the admissions process (Clinedinst & Hawkins, 2006).

Satisfaction with college and achievement of educational goals are tied to the quality of information students receive in high school. However, most schools do not have designated college counselors or individuals with specialized knowledge in the high school to college transition (Kirst & Venezia, 2004; McDonough, 2004). Clinedinst and Hawkins (2006) found that only 21% of public schools, compared to 77% of private schools, reported employing at least one counselor exclusively for college counseling. Faley and Heyns (1984) found that higher college attendance rates of private school students was attributed to the school culture, organizational structure, staffing, and college counseling and resources. To significantly influence college access for low-income, first-generation, and minority students, research has concluded there is a need to improve high school counseling (McDonough, 2005; Plank & Jordan, 2001).

Counselors have a myriad of responsibilities including test administration, course scheduling, general counseling services, college counseling, addressing disciplinary issues, supporting students with special needs, and other administrative duties (Venezia et al., 2003). That is why it is not surprising that students reported that college counseling was lacking. Because students reported having to initiate college conversations with their counselor they assumed college counseling was only for honors students (Venezia et al., 2003).

Many students turn to teachers when counselors are not available to fill in the gaps about college planning (Venezia et al., 2003). Teachers express concerns because they feel they do not have the training or knowledge to provide students with up to date information. While most teachers want to be more involved, teachers from many states reported counselors were often

territorial and didn't share information or resources they needed to be equipped to help students. Often, they turned to student teachers, newspapers, recent high school graduates, their own children and experiences to get their college information (Venezia, et al., 2003).

Equal access to "college knowledge" is key to raising college enrollment rates and increasing access to all students, not just the ones we know are going to college. McClafferty, McDonough, & Nunez (2002) argue that schools should decrease the ratio of students to counselors and expect all staff to help students explore postsecondary options. Every student should feel that college is an option and have support from the entire school staff navigating the process, not just one guidance counselor. Schools must raise awareness of postsecondary options and clearly connect the high school experience to future success.

In order for students to be academically prepared for college, schools must have high expectations for all students and offer equal access to rigorous, college preparatory courses. Schools must create an environment where college is a reasonable option for all students (McClafferty, McDonough, & Nunez, 2002). Research indicates that many students who do not succeed in college experience a gap in their high school experiences and college expectations; many high school graduates that do enroll in college find the quality and rigor of their high school courses did not prepare them for college-level work (Perna & Thomas, 2006). The best predictor of whether students will go on to complete a bachelor's degree is the intensity and quality of their high school curriculum (Kirst & Venezia, 2004). McDonough (1997) suggests that in an environment where college is the 'norm', students who are expected to go to college not only go but are prepared academically to succeed at the postsecondary level.

School Culture

Although there is no universally accepted definition of school culture, there is a general agreement that culture influences everything that happens in a school. Deal and Peterson (1999) defined school culture as the:

> unwritten rules and traditions, norms, and expectations, that seem to permeate everything: the way people act, how they dress, what they talk about or avoid talking about, whether they seek out colleagues for help or don't, and how teachers feel about their work and students (p.2-3).

Willard Waller (as cited in Deal & Peterson 2002) "argued that every school has a culture of their own, with a set of rituals and folkways and a moral code that shapes behavior and relationships" (p. 8). Schien (2004) believes all schools build up a distinct personality as people deal with tragedy, solve problems, and celebrate. As people go about their day, they often take for granted these expectations; in short, school culture is the way things are done around here.

Schein (1992) created three levels of school culture analysis based on how visible the culture is to an observer. The first level of culture is artifacts associated with the organization. Artifacts include things people see, hear, and feel. Although these are easy to identify, Schein (1992) argues this should not be the only measure for analyzing the culture because personal interpretation can affect the findings. The second level of culture is espoused values (Schein, 1992). These values are a fundamental part of the organization's past and present success. The third level is basic assumptions. These are the actions that are not debated within an organization. This level is such an essential part of the culture that if someone does not believe in these basic assumptions they are considered outsiders (Schein, 1992). When the third level of culture is changed or challenged, it creates anxiety. Schein (1992) suggests that in order for the change to become a permanent part of the culture, the anxiety must be addressed.

School culture has been identified as a major factor in enhancing student motivation, completing high school, and entering postsecondary education (Bandura, 1993, Deal & Peterson, 1999, Hoy & Miskel, 2005). Motivation is a function of self-confidence which in turn affects productivity and enhances effectiveness (Hoy & Miskel, 2005, Kariuki & Wilson, 2003). Renchler (1992) found there was a positive correlation between school culture, student motivation, and student achievement. Bandura (1993) believes student efficacy is tied to previous successes; he referred to this as mastery. As students build mastery and begin to see successes in high school, they will begin to believe they can be successful in postsecondary education. Furthermore, Bandura (1993) identified collective teacher efficacy as a major component of an effective school culture. He stated that faculty efficacy to promote learning had a greater impact on student achievement than socioeconomic status. Teachers and students are more likely to succeed when the culture includes high expectations, fosters hard work, is dedicated to the school mission, and focuses on learning for all students. The willingness of the faculty, students, and parents to put time into continuous improvement is affected by culture; therefore the key to success depends on the type of culture created (Deal & Peterson, 2002).

School culture sharpens the focus on what is important and valued. Deal and Peterson (1998) believe it is easier to motivate student learning if the school culture expects, respects, and rewards student achievement and the motivation to learn. These researchers concur that a strong school culture could be the best way to improve student achievement, a finding which one could infer may improve graduation rates and allow the option for more students to attend college. McClafferty, McDonough, & Nunez (2002) emphasize the importance of transforming the school culture so that all students are able to reach their educational aspirations through realistic, attainable goals. Student achievement is critical in enhancing students' college access and

matriculation, but more specific rationalization of the role of school culture in fostering the idea of postsecondary education is needed. Therefore, McDonough's College-going culture theory helps emphasize what factors of school culture support students as they prepare for postsecondary success.

Manifestations of school culture

Research on organizational culture provides a framework for the external and internal dimensions of a culture. The external adaptation of culture is seen through how a group defines who they are in relationship to the external world. The internal integration manifests in a group's behaviors, beliefs, and language (Schein, 2004). Schein (2004) categorizes these manifestations of culture into three levels referred to as artifacts, beliefs and values, and underlying assumptions. Artifacts are at the surface level and include observed rituals and ceremonies as well as language and other visible products and organizational structures. Strategies, goals, and philosophies of the group are included in the beliefs and values level. Lastly, underlying assumptions are those intangibles that include perceptions, thoughts, and feelings that are shared, reinforced, and often difficult to change.

School culture manifests through a school's norms, values, rituals, and assumptions (Hoy & Miskel, 2005). Norms are unwritten rules and expectations that build up over time as administrators, teachers, staff, parents, and students work together. All schools have a set of expectations around staff development, acceptable student behavior during and after school, what constitutes good teaching, etc. (Deal & Peterson, 2002). Rituals include events such as new student/freshman orientation, celebrations of academic and athletic successes, and procedures for the opening and closing of the school. School culture creates distinction among organizations

and provides them with a sense of identity; it is the social glue of the organization (Hoy & Miskel, 2005).

The importance of school leadership in school culture

"Groups of people can be affected by the culture in which they participate, and this domain *is* under the control and stewardship of the principal" (Renchler, 1992, p.4). School principals have many avenues in which to shape a school's culture. Establishing a school-wide vision that is universally valued and promoted daily is essential (Deal & Peterson, 1999). Core values are communicated in what they say and do – they powerfully speak of the deeper mission of the school. School principals recognize, honor, and celebrate teachers, staff, students, and community members who serve the students and purpose of the school (Deal & Peterson, 1998).

Transformational leadership combined with a strong school culture positively impacts student achievement (Barnett & McCormick, 2004, Scope, 2006). Research suggests that transformational leaders can improve a school by helping create strong cultures of success. The strong connection between school culture and achievement has been statistically significant regardless of research design and achievement variables (Maher, 2000; Lucas, 2001). Since school leaders can influence school culture, focusing on positively affecting the culture is important because of the impact on school improvement (Barnett & McCormick, 2004).

School leadership does not solely rest on the principal but includes teachers and parents. School cultures are reinforced by teachers' actions and include positive parental involvement (Deal & Peterson, 1998). School leaders cannot accomplish change without the support of the teachers. However, school principals' personal beliefs, values, and motivations shape school culture and, whether positive or negative, can be contagious (Renchler, 1992). When

administrators have a positive attitude combined with high expectations for students and staff, they can shape the behaviors and beliefs of the school community to accomplish certain desirable outcomes. In order to create sustainable change, one must have the support of the school culture (Deal and Peterson, 2009). Therefore, the culture of the school can impact student achievement as well as college access and postsecondary success.

College-going Culture Theory

Literature and research on the transition from high school to college identifies critical steps for schools to increase college access and building a college-going culture. A school's culture should encourage all students to explore a variety of postsecondary options. Corwin and Tierney (2007) define culture as "the intersection of beliefs and practices" and an organization's norms and values. Furthermore, a school's culture develops aspirations and promotes access and success in college. They identified five elements necessary for building a college-going culture including "academic momentum, an understanding of how college plans develop, a clear mission statement, comprehensive college services, and coordinated and systematic college support" (Corwin & Tierney, 2007).

The College Board (2006) offers an extensive evaluation model for schools to assess their current culture, research best practices and programs, and ultimately create a college-going culture. They recommend setting goals and implementing programs that are designed to shift the school culture from one whose goal is to graduate students to one whose goal is to prepare all students to continue their education after high school.

Furthermore, the College Board (2006) suggests creating a college-going culture requires a shift in attitude across the entire school where the idea of high expectations for all students is

promoted. Working collaboratively with parents and the community to remove barriers from preparing all students for postsecondary success is crucial. They advise administrators to rely on the expertise within their building; the teachers know the students and community and are invaluable during this process of change (College Board, 2006)

Patricia McDonough (1997, 1998) has done extensive research in college access and educational attainment. She defines a college-going culture as one where "all students are prepared for a full range of postsecondary options through structural, motivational, and experiential college preparatory opportunities" (n.d., p. 2). McDonough (1997, 1998) suggests using the organizational culture approach. Schools need to recognize their role in reproducing social inequalities and the effect on college access and enrollment. Her research linked the differences in high schools' college enrollment rates by demographics and student achievement to schools' structural and cultural arrangements. Furthermore, her work provides evidence for the need to develop a college-going culture to increase equal access to college, especially for low-income, first generation, and other underrepresented students. She has identified nine principles for creating a college-going culture in schools. Along with these principles, she has developed four specific objectives that are imperative to creating this kind of culture:

- "School leadership is committed to building a college culture;
- All school personnel provide a consistent message to students that supports their quest for college preparatory K-12 experience;
- All counselors are college counselors; and
- Counselors, teachers, and families are partners in preparing students for college" (n.d., p. 2).

In order for students to succeed in postsecondary education, student achievement is essential; however, the role of school culture in facilitating and increasing college access, matriculation, and postsecondary success, needs more investigation. McDonough's college-going culture theory is designed to help support schools in their efforts to prepare all students for college and postsecondary success. Creating a college-going culture focuses on all successful postsecondary options, not just college. For this study a college-going culture is defined as "one that encourages all students to consider college as an option after high school and prepares all students to make informed decisions about available postsecondary options" (McClafferty, McDonough, & Nunez, 2002). The message is that college is an option for all students regardless of race, class, gender, or parents' educational attainments. Overall, students need to believe they can have a successful future and that they can plan and prepare for various options leading to a productive life after high school.

The nine principles of a college-going culture were designed to allow schools to measure the extent to which this culture currently exists in their school. The model also suggests ways to strengthen the culture. The first three principles are directly related to students' acquisition of college knowledge; the second three concentrate on the contributions of the faculty, administrations, and school structure; and finally the last three principles address the role of external stakeholders such as families and postsecondary institutions.

College Talk

Schools with a strong college-going culture have clear, ongoing communication between students, teachers, administrators, and families about what it takes to get to college. The idea is that the more conversations that take place, the clearer the understanding of what is required and expected of students to stay on the college path (McClafferty, McDonough, & Nunez, 2002;

McDonough, 2005, 2006). An emphasis on college talk gives faculty, administrators, and families a time to share their own college experiences. College talk influences students' college aspirations and preparation as they listen to stories of others' college experiences. This aligns with Conley's (2007) model of college readiness that outlines four concentric levels that can be most influenced by schools directly. The fourth domain in his model is contextual skills and awareness. This domain refers to 'college knowledge' or knowledge of the college application process which includes college fit, financial aid, and college level expectations. The college talk principle responds to the gap many students and families face around college knowledge.

The college talk principle also addresses gaps in social capital. Social capital in terms of college access includes the importance of college norms, college knowledge, and guidance and support (McDonough, 1997; Perna & Thomas, 2006). Nagaoka, Roderick, & Coca (2009) point out that low-income and first generation students may find it difficult to connect their college aspirations to actual enrollment due to lack of access to social capital. Therefore, by incorporating more college talk into the regular school day more high school students will gain college knowledge and be introduced to college norms through social capital.

Clear Expectations

Developing clear expectations around preparing students for a full range of postsecondary options is the second principle of McDonough's theory. This principle recommends that schools clearly communicate their expectations that all students will be prepared for college. Furthermore, school's that have mastered this principal incorporate these expectations so deeply into their culture teachers, counselors, and parents know their role in helping all students through the college application process (McClafferty et al., 2002).

Schools with clear expectations incorporate references to postsecondary preparation in their missions, strategic plans, and visions. All stakeholders know their role in facilitating students' postsecondary plans (McClafferty, McDonough, & Nunez, 2002; McDonough 2006). McClafferty et al. (2002) link this principle to students' college aspirations. Students' college plans are influenced by schools and families. Schools with cultures that expect students to pursue postsecondary education have a positive effect on students' college aspirations; while the opposite is true for schools with low or no expectations for postsecondary success (McDonough, 1997). Students' college aspirations can be encouraged by the school community. McDonough (1997) found that schools as well as families influence students' college aspirations and choice.

McDonough (1997) found that socioeconomic status also plays a role in student college choice and aspirations. Families from high socioeconomic backgrounds tend to have higher levels of education giving them access to more college knowledge. She also found that schools that served a population of lower socioeconomic status presented students with fewer options from less selective institutions. Clear expectations are a critical component especially for low-income and first-generation students. Establishing college as the norm in schools that serve lower socioeconomic students can be tremendously influential for these students.

Information and Resources

Information and resources is the next principle in McDonough's college-going culture theory. The third principle says that high schools must keep the information and resources about college timely and current and in a space easily accessible by students, families, educators, and the community. This space should include comprehensive information and resources about the college application process including standardized tests, scholarships and financial aid information, and career and college choices (McClafferty et al., 2002; McDonough, 2006).

McDonough's (1997) study on college choice examined the role of information and resources in college aspirations and college choice. Findings indicated that schools in poorer communities shared less information and had fewer resources to support college choice, in turn affecting their college aspirations. Furthermore, the way schools disseminate information and resources about the college application process is connected to college enrollment. Students are more likely to enroll in college when schools have a strategic plan for distributing college information to all students as compared to schools with minimal plans for distribution (Hill, 2008). The more resources that schools have and the more intensely they distribute information the more influential the school is in promoting 4-year postsecondary institutions especially for minority and first generation students (Hill, 2008).

According to a study by Antonio, Kirst, and Venezia's (2003), many students look to their teachers for information about college. However, usually only guidance counselors have the most updated information about the college application and financial aid process. Schools with a high level of college-going culture expect faculty to be current on college information and resources even when counselors take the main role in disseminating this information. Therefore, the information and resources principle emphasizes the expectation that all faculty have up to date college information and are aware of the resources available to student and parents to help with college access and enrollment.

Comprehensive Counseling Model

According to McDonough (2005), "college plans do not simply just happen. They must be fostered and encouraged through a school's culture and the counselor is key to this development of culture." Since counselors are one of the most influential pieces in shaping a college going culture and students' college aspirations, all counseling interactions should include

college and career counseling; this means that all counselors should be college counselors. Families and students view counselors as very influential in students' attitudes and aspirations toward enrolling in college (McClafferty et al., 2002; McDonough, 2006). However, counselors face many barriers when it comes to creating a college-going culture and focusing on college counseling.

The fourth principle in McDonough's theory focuses on creating a comprehensive counseling program. The comprehensive counseling model allows for the time necessary for counselors to stay current on college information and build the skills and knowledge they need to provide all students with guidance around the college application process (McClafferty et al., 2002). Counselors are often responsible for managing course schedules for all students, organizing and implementing tests, and support the handling of discipline referrals (McDonough, 2002, 2004; Venezia, 2004). Although the American School Counselors Association (2012) recommends a counselor to student ratio of 1 to 250, the national counselor to student ratio average is 1 to 459, making it very difficult for counselors to adequately support all students through the postsecondary choice process. The comprehensive college counseling model principle addresses the structural barriers to creating a college going culture as counselors need the knowledge, skills, and structure to guide families through the college choice and application process (McDonough, 2006).

According to previous research the percentage of a school's graduates enrolled in college, percentage of students completing the FAFSA, percentage of students taking college entrance exams, and the number of students completing more than three college applications, have strong relationship to postsecondary enrollment (Nunez and Kim, 2012; Perna, 2000; Roderick et al., 2011). This would indicate that promoting college preparation – completing applications,

finding financial aid, etc. is at least somewhat influenced by the college counseling model the school uses and how intensely and widely spread the school promotes it.

Testing and Curriculum

The next principle of the college going culture theory is testing and curriculum. Standardized tests and a rigorous curriculum are critical steps in the college application process. Antonia et al. (2003) found that when the courses are available, minority students are often underrepresented in honors and advanced courses. Engberg and Wolniak (2010) found an increase in college enrollment was related to the average number of AP courses offered at a high school. Schools that make a rigorous curriculum available to all students ensure equal opportunities among low-income and minority students. These courses not only prepare them for but make them eligible to attend a four-year institution (Oakes, 2003).

ACT benchmark scores can predict success in college and has been linked to grade point averages, retention, and graduation (Lichtenberger & Dietrich, 2012; Marsh Vandehey, & Diekhoff, 2008; Schmitz, 2003; Scott-Clayton, 2012). College placement exams should be made available to high school student in order to better prepare them academically for college and understand college-level expectations (Kirst & Venezia, 2004). MacDonald and Dorr (2006) posit increased opportunity to prepare for these tests is essential. Furthermore, making the PSAT or PLAN test available free of charge to all 10^{th} graders on a school day will allow time for students and educators to identify areas for improvement. Hopefully, resulting in students being better prepared for the college entrance exams in their junior and senior years of high school (MacDonald & Dorr, 2006).

Too often students underestimate the courses they will need to prepare for college. Therefore, they do not take the prerequisites required for advanced high school courses (Horn & Nunez, 2000). To add to the confusion, high school graduation requirements do not necessarily correlate to college admissions courses. ACT, Inc. (2003) reported that only about one third of 8th graders planned to complete the recommended college readiness high school courses. As a result, rigorous course selection should start as early as middle school. Rigorous courses taken in middle school allow students to enroll in advanced course in high school. Often, these higher level courses integrate information about postsecondary opportunities. Horn and Nunez (2000), found that among first-generation and minority students, those that took higher-level math course were more likely to attend college. Hence, a strong college-going culture not only offers a rigorous college-ready curriculum but ensures equal access to it.

Schools with a college-going culture ensure all students are knowledgeable about testing dates. They offer resources for being successful at standardized tests and clearly disseminate information about fee waivers. The coursework offered prepares students for college-level work and all students are encouraged to take courses that make them eligible for college admissions (McClafferty et al., 2002, McDonough, 2006). Unfortunately, low income students are often unaware of the importance of standardized tests and course selection in the college admissions process (Choy, Horn, Nunez, & Chen, 2000). Therefore these students leave high school without completing the coursework or taking the tests necessary to complete the college application process.

Faculty Involvement

Faculty involvement, the sixth principle, emphasizes the role the faculty plays in shaping the culture. With the overwhelming responsibilities of most high school counselors, teachers

should share in the responsibility of building a college-going culture and disseminating information to students about college. This principle stresses the importance of preparing students academically for college and asks teachers to incorporate the idea of college throughout their curriculum. Through student-teacher interactions college knowledge can be passed onto students more regularly. Schools with strong college-going cultures expect teachers to share college information with students. These schools also provide faculty with professional development focused on current college admissions processes (McClafferty et al., 2002).

Nagaoka, Roderick, and Coca (2008) found that the single most consistent predictor that a student enrolled in postsecondary education was whether students attended a school with a strong college-going climate. They measured this climate by averaging survey responses of teachers from the same school about the college climate in their school. The survey included questions about the extent to which the students in their school enrolled in college, whether the curriculum was geared towards preparing students for college, and the teachers helping students plan for college outside of the classroom. They found schools with strong college-going climates were ones where teachers reported the entire faculty pushed students to go to college, made certain that students were prepared, and supported students in completing college applications. Therefore, in schools where teachers' expectations and involvement were high, students were significantly more likely to enroll in college; moreover, this also made the biggest difference for students who needed much more support in navigating and managing the college application process.

Family Involvement

The family involvement principle emphasizes the importance of family members being informed partners. The school should provide opportunities for families to gain knowledge of

the college planning process. Families must also be informed by counselors and school staff that their child is college material. The staff and faculty serve as a resource for parents to help strengthen the students' support network (McClafferty, et al., 2002). Timely information from the school about educational planning supports parents' efforts to be involved. It increased student success, encourages college planning, and increases the likelihood that their student will attend college (McDonough, 1997).

Low-income, first-generation, and minority students often receive less support from their parents in the postsecondary planning process resulting in these students being less likely to enroll (Warburton, Bugarin, & Nunez, 2001). As parent involvement tends to decrease from elementary to middle and high school, schools are faced with increased challenge in reaching these parents. Ceja (2006) found that parents with limited personal educational experiences were not as capable to help their children through the college application process. These parents did not have the prior knowledge and lacked the resources to access the information necessary to navigate the process. Even when parents have high expectations, the lack of information and knowledge of what their children need to be successful in the college application process hinders their success. Unfortunately, these parents may not be able to provide timely, accurate information to help their student select courses and colleges (Horn and Nunez, 2000). With the lack of information and communication from the school, some parents are rarely informed about their student's educational planning; therefore, the student relies on the faculty, counselors, and friends to help them choose courses and select colleges (Jordan and Plank, 2000).

College Partnerships

College partnerships, the next principle in McDonough's theory, increase students' awareness of and preparation for postsecondary education. The high school/college initiatives

provide high school students with access to college resources, offerings, and norms and address high school students' needs through the development of programs and activities in partnership (Barnett & Hughes, 2010). These partnerships can include traditional dual-enrollment courses and tech prep programs that link the last two years of high school career-technical education programs to the first two years of college. Partnering with colleges so that students are able to attend classes on a college campus while in high school increases student confidence; they feel more independent and responsible (Burns & Lewis, 2000). Offering college placement tests to high school students will provide information on skill deficiencies that can then be addressed before the student graduates high school (Barnett & Hughes, 2010).

Hill (2008) found that high school with a strong college-linking strategy were more effective at facilitating four-year college enrollment. These strategies were found to be the norms in schools. Substantial resources as well as a strong organizational commitment to ensure these resources were disseminated equally among all parents and students were found to be typical of schools that implemented a strong college-linking model. The college-linking strategies included encouraging college visits, assisting with college applications, assisting with financial aid applications, contacting college representatives, and including parents in the college selection process (Hill, 2008).

A strong, active relationship between K-12 schools and local postsecondary institutions enhances student access to campus visits, college fairs, and interactions with college students and college faculty. The many opportunities for college-related activities and academic enrichment programs from these partnerships can significantly influence students' college aspirations. (McClafferty, McDonough, & Nunez, 2002). These partnerships create pathways to postsecondary education for all students. Furthermore, the partnership must be deep and broad

in order to reach every single student in the school and ensure a successful transition to some type of postsecondary education (Allen & Murphy, 2008).

Articulation

The last principle of McDonough's theory is about the articulation of the college message between elementary, middle, and high school being constant and consistent. Articulation can be vertical from elementary to middle to high school to college; and articulation can be horizontal between math and science, between English and history, and between schools (Madison, n.d.). This principle focuses on ensuring the creation of a seamless culture that is consistent in its college message vertically and horizontally. The message of college and postsecondary options and expectations is continuous throughout each student's educational pathway. The activities around college and career readiness are coordinated and collaborative across all schools and all grade levels (McClafferty et al., 2002).

Summary

Having more information and guidance about the college application and financial aid process beginning at an early age is linked to great levels of college enrollment (Plank and Jordan, 2001; Hill, 2008). Although there is little research linking a college-going culture to college enrollment, there are a few studies. Engberg and Wolnaik's (2010) data shows evidence that the high school environment affects college enrollment. Furthermore, Roderick et al. (2011) suggest that when high schools establish norms that support students in the college preparation and application process there is evidence of higher college enrollment especially to more selective institutions.

Chapter Three: Research Methods

This study examined the level of school college-going culture as perceived by teachers and counselors in selected West Virginia high schools. This study also investigated the differences in the level of implementation of a school's college-going culture based on selected independent variables: role at school, years of teaching experience, years taught at current school, school enrollment, percent needy, and access to rigorous curriculum. Finally, the study investigated the relationship between the level of college going culture and the school college enrollment rate as reported by the West Virginia Higher Education Policy Commission. The purpose of this section is to provide a description of the methods, research design, population, instrumentation, data collection, and data analysis.

Research Design

In order to collect data from a large number of teachers and counselors in selected West Virginia high schools, a cross-sectional descriptive research design was employed. Cross-sectional research collects data during a single point in time (Johnson & Christensen, 2008). While descriptive research attempts to explain relationships among existing variables and may use quantitative, qualitative, or mixed methods data collections (Fink, 2003). According to Fink (2003) the quantitative research design is a one-shot cross sectional design that may be used to gather data of a selected group's opinions at one point in time.

Population

The population for this study included teachers and counselors from 36 West Virginia high schools. The high schools with 18 highest and 18 lowest college enrollment rates averaged from the graduating classes of 2009, 2010, 2011 and 2012 were selected for inclusion in the

study. The high schools were selected by using college-going data from the West Virginia Higher Education Policy Commission. The total population was surveyed. Ten low-performing and eleven high-performing schools' administrators gave permission to survey teachers and counselors in their buildings. Of the 1,763 teachers and counselors surveyed, there were 372 responses – 148 responses from low-performing schools and 224 responses from high-performing schools. The schools and number of teachers and counselors in each school are listed in Appendix A.

Instrumentation

The Nine Principles of a College-Going Culture Theory by McDonough (1997) provided the framework for developing the survey instrument used in this study. The survey instrument, *"Principles of a College-going Culture,"* is a three-page, researcher developed questionnaire based on the nine principles outlined in McDonough's theory (see Appendix B) which consists of two parts. The first part has two demographic questions related to years of experience and years teaching at current school. The second part consists of nine sections each reflecting one of the principles from the McDonough model. Each of the nine principles is represented by 3-5 questions totaling 39 questions. A seven point scale was used to indicate their perception of the level of implementation of a college-going culture at their school.

To ensure content validity, a draft of the instrument was reviewed by a panel of experts who understand school culture. A list of those individuals is provided in Appendix C. The draft was also pilot tested; the instrument was administered to 3-5 individuals representative of the study population.

Data Collection

Each principal of the 36 selected high schools was sent an e-mail (Appendix D) explaining the purpose of the study with an attached letter (Appendix E) requesting permission to distribute surveys to the professional staff in the building. The email message requested a reply within five working. Follow-up calls were conducted as needed after the five day period.

The first page of the survey contained a cover letter (Appendix F) introducing the study and providing information regarding confidentiality, instructions for returning the completed survey, and the researcher's contact information. An envelope was provided with each survey so that responses can be sealed. A sealed box was provided at each school for deposit of completed surveys.

Survey data were collected by distributing packets to the schools; packets were delivered by the regional College Summit representative, the researcher, or US mail. The professional staff was asked to return completed or blank surveys within two weeks from the date of distribution. The sealed box with returned surveys were collected by the regional College Summit representative, the researcher, or US mail.

Data Analysis

Data collected to address research question one was analyzed by subscale and total using 1-sample T-test conducted to determine the level of significance with a $p < .05$. Data collected to address research question two was analyzed by subscale and total using an independent sample T-test and ANOVA. To address research question three, a Pearson correlation between the level of college-going culture and the college-enrollment rate was calculated for each subscale and total.

Chapter Four: Presentation of Findings

The primary purpose of this study was to examine the level of college-going culture as perceived by teachers and counselors in selected West Virginia schools. The study also sought to determine if there were differences in the level of implementation of school college-going culture based on selected independent variables: role at school, total years of teaching experience, years teaching at current school, school enrollment, access to rigorous curriculum (percent of AP enrollment), and overall SES level (percent needy). Finally, the study sought to identify the relationship between the level of college going culture and college enrollment rate in this same group of schools. Chapter four is organized into the following sections: a) data collection b) respondent characteristics; c) major findings for each of the three research questions; d) ancillary findings; and e) a chapter summary.

Data Collection

Data for this research study were collected through a two-page, self-report paper survey, *"Principles of a College-going Culture"* (Appendix B). Principals from the 18 West Virginia high schools with the lowest and the 18 West Virginia high schools with the highest college-going rate averaged over four years (2009-2012) were sent an e-mail request for permission to distribute the survey to the professional staff in their buildings (Appendix E). The request was sent to principals and some county administrators as some counties required that permission to survey the faculty be granted at the county rather than the building level. Administrators were asked to respond to the e-mail within five school days indicating whether or not permission to administer the survey was granted. Administrators from 21 of the 36 selected high schools granted permission for distribution of the surveys in their buildings. Ten of the participating schools were low-performing and had a college-going rate of 28% to 45%. There were 587

surveys distributed in low-performing schools and 148 respondents. The remaining eleven high school were high-performing with a college-going rate of 65% to 81%. Of the 1,176 surveys distributed, 224 were completed and returned.

Upon notification of permission to survey teachers, blank survey forms and a cover letter (Appendix F) were mailed or delivered to participating schools by the co-principal investigator or the regional College Summit representative. The surveys were distributed between February 17, 2014 and February 28, 2014. The number of surveys provided to each facility was determined by using data from the West Virginia Department of Education website. One thousand seven hundred and sixty three surveys were distributed to the 21 participating schools. Three hundred and seventy two responses were received from the 21 schools. The response rates ranged from 1.9% to 11.3%. Collection of completed surveys began March 3, 2014 and was completed April 25, 2014.

Respondent Characteristics

In Part A of the survey, participants were asked to respond to three items that provided demographic information. The demographic questions included participant role in the building, the total numbers of years of teaching experience, and the total number of years teaching at their current school. Ninety-one percent of the respondents indicated they were teachers and 8.7% reported they were administrators/counselors. For the purpose of analysis four categories were consolidated into three for total number of years of teaching experience and total number of years teaching at their current school. The less than one year and one to five year groups were combined. A little more than one fifth (21.8%) of the educators had 0 – 5 years of teaching experience. Twenty-one percent had 6 – 10 years of experience, while 57.2% had 11 or more years of teaching experience. When the respondents were asked how many years they had taught

at their current school, 45.2% reported being there 1-5 years, while 22.9% reported 6-10 years, and 32% reported 11 or more years. These data are presented in Table 1.

The total number of students enrolled, the number of students enrolled (seat count) in AP courses, and percent of needy students at each school were collected. By dividing total student enrollment by AP seat count data, a percentage of students enrolled in AP courses was calculated. Lastly, college-going rate was collected for each school from the West Virginia Higher Education Policy Commission's online data portal and averaged over four years (2009-2012). This information was used to put the 21 schools into categories as presented in Table 2.

Table 1

Demographic Characteristics of Participating Educators

Characteristic	n	%
Role at School		
Teacher	336	91.3
Counselor/Administrator	32	8.7
Total years teaching experience		
0 – 5	80	21.8
6 – 10	77	21.0
11 or more	210	57.2
Total years teaching at current high school		
0 – 5	164	45.2
6 – 10	83	22.9
11 or more	116	32.0

Note. N=372

Table 2

Attributes of Participating Schools

Attributes	n	%
Total Enrollment		
234 – 658	129	34.7
733 – 1088	126	33.9
1129 – 1893	117	31.5
SES level		
19.3% - 37.8%	107	28.8
42.2% - 45.7%	91	24.5
48.7% - 54.1%	91	24.5
57.2% - 86.7%	83	22.3
Access to rigorous curriculum*		
10.2% - 24.4%	182	51.4
28.3% - 38.1%	98	48.8
College-going rate		
28.1% - 45.0%	148	39.8
65.0% - 80.6%	224	60.2

Note. N=372
*Percent of students in enrolled in AP courses (seat count)

Major Findings

This section presents the major findings from the study. The findings discussed within this section are organized around the three research questions investigated.

Level of College-going Culture

Thirty-nine attributes of a college-going culture, based on the Nine Principles of a College-going Culture Theory (McClafferty, et. al., 2002), were listed in Part B of the survey. Respondents were asked to use a scale of 1-7, with 1=rarely true, 4=sometimes true, and

7=usually true, to rate the extent to which each attribute was true for their school. A one sample t-test, comparing the sample mean for each question to the mean score (M = 4) from a hypothetical normal distribution was conducted on each of the 39 attributes for high- and low-performing schools. Each of the 39 attributes from the survey were organized into nine sub-categories of McDonough's College-going Culture Theory. Questions 1-5 are from College Talk, 6-10 Clear Expectations, 11-15 Information and Resources, 16-20 Testing and Curriculum, 22-24 Comprehensive Counseling, 25-29 Family Involvement, 30-32 Faculty Involvement, 33-36 Postsecondary Partnerships, and 37-40 Articulation. When compared to the comparison mean, the sample means for all 39 attributes for both high and low-performing schools were statistically significant at $p < .05$. These data are presented in Tables 3-11 by sub-category.

Total sub-category scores for each principle were calculated by summing the responses to the three to five questions in each principle category. A one-sample t-test ($p < .05$), comparing each total sub-category mean to the applicable mean score (M = 12, M = 16, or M = 20) from a hypothetical normal distribution, was conducted for each sub-category. The results for the respondent mean scores for the nine sub-categories yielded the following results: College Talk high performing (M=25.32, SD=5.71, CM=20) and low-performing (M=26.39, SD=5.39, CM=20), Clear Expectations high-performing (M=28.64, SD=5.03, CM=20) and low-performing (M=29.08, SD=5.17, CM=20), Information and Resources high-performing (M=28.30, SD=5.37, CM=20) and low-performing (M=29.71, SD=4.98, CM=20), Testing and Curriculum high-performing (M=29.02, SD=5.18, CM=20) and low-performing (M=30.32, SD=4.97, CM=20), Comprehensive Counseling high-performing (M=15.67, SD=3.76, CM=12) and low-performing (M=16.59, SD=3.60, CM=12), Family Involvement high-performing (M=26.63, SD=6.60, CM=20) and low-performing (M=27.66, SD=6.14, CM=20), Faculty Involvement high-

performing (M=14.34, SD=3.92, CM=12) and low-performing (M=15.94, SD=3.64, CM=12), Postsecondary Partnership high-performing (M=23.57, SD=4.46, CM=16) and low-performing (M=23.54, SD=4.23, CM=16), and Articulation high-performing (M=20.00, SD=5.30, CM=16), and low-performing (M=21.71, SD=4.58, CM=16). When compared to the respective comparison means all sub-category scores for both high and low-performing schools were significant at $p < .05$. These data are presented in Table 12.

A total college-going culture score was calculated by summing the individual responses for each of the 39 survey questions. A one-sample t-test ($p < .05$) was used to compare the total mean score with the mean for high-performing (M=209.92, SD=36.20, CM=156) and low-performing (M=221.68, SD= 34.84, CM=156) schools from a hypothetical normal distribution. When compared to the comparison means, the sample means were statistically significant for both high and low-performing schools at $p < .05$. These data are also provided in Table 12.

Table 3

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the College Talk Sub-category

Attributes	Performance Level	M	SD	t
1. Conversations about educational options for students after high school are ongoing.	H	5.61	1.52	15.89*
	L	5.88	1.31	17.42*
2. Conversations about educational options are initiated by the majority of school faculty.	H	4.93	1.48	9.33*
	L	5.42	1.39	12.28*
3. School faculty share stories and information about their postsecondary journey with students.	H	5.24	1.56	11.75*
	L	5.67	1.27	15.89*
4. Messages about college as something attainable are communicated verbally by faculty.	H	5.70	1.26	20.03*
	L	5.92	1.13	20.59*
5. Teachers connect the subject matter they teach to educational options, potential college majors, and/or possible careers.	H	5.53	1.36	16.82*
	L	5.65	1.26	15.87*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True

*$p < .05$

Table 4

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Clear Expectations Sub-category

Attributes		Performance Level	M	SD	t
6.	Expectations of what it takes to be prepared for postsecondary education are a part of the daily school culture.	H	5.53	1.43	15.96*
		L	5.66	1.22	16.56*
7.	All students are expected to be prepared to succeed in postsecondary education.	H	5.00	1.56	9.63*
		L	5.24	1.50	10.08*
8.	Families understand that all students are expected to be prepared for postsecondary education.	H	4.22	1.44	2.26*
		L	4.28	1.58	2.14*
9.	Students are aware of the full range of options they might pursue after high school.	H	5.02	1.50	10.17*
		L	5.27	1.37	11.28*
10.	Students know the key activities (coursework, community service, etc.) they must complete in order to graduate from high school.	H	5.92	1.31	21.90*
		L	5.85	1.26	17.90*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 5

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Information and Resources Sub-category

Attributes		Performance Level	M	SD	t
11.	Current information about postsecondary options and financial aid are readily accessible to students and families (space in the counseling center, information on school website, etc).	H L	6.14 6.10	1.15 1.15	27.94* 22.17*
12.	Information related to the key steps in the postsecondary application process (ACT/SAT test dates, scholarships, financial aid, etc.) is regularly updated and visible throughout the school.	H L	6.00 6.09	1.23 1.20	24.22* 21.16*
13.	Students are aware of career options available those **with** a college degree.	H L	5.65 5.85	1.29 1.17	19.23* 19.13
14.	Students are aware of career options available to those **without** a college degree.	H L	5.16 5.65	1.40 1.29	12.31* 15.51*
15.	Resources (internet access, lab time, etc) are provided so that all students can explore postsecondary options and information online.	H L	5.34 5.98	1.73 1.25	11.59* 19.30*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True

*$p < .05$

Table 6

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Testing and Curriculum Sub-category

Attributes	Performance Level	M	SD	t
16. Teachers and counselors discuss the importance of standardized tests (PLAN, PSAT, ACT, and SAT) for college admissions.	H	5.77	1.42	18.59*
	L	6.03	1.19	20.72*
17. Teachers and counselors help students understand the meaning of the scores they receive on standardized tests.	H	5.26	1.48	12.64*
	L	5.88	1.11	20.63*
18. Standardized test dates and deadlines are promoted throughout the building.	H	5.84	1.45	19.04*
	L	5..99	1.19	20.32*
19. All students have the opportunity to take the ACT and SAT regardless of cost (fee waivers provided).	H	5.73	1.51	16.29*
	L	6.11	1.33	18.64*
20. Students have access to rigorous postsecondary-preparatory coursework like AP classes, dual enrollment classes, etc.	H	6.48	0.95	38.56*
	L	6.16	1.27	20.59*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 7

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Comprehensive Counseling Sub-category

Attributes	Performance Level	M	SD	t
22. Faculty members serve as resources for the latest "college knowledge" information.	H	5.01	1.47	10.26*
	L	5.34	1.43	11.32*
23. A faculty member works with students to plan the academic path that will best prepare them for their postsecondary options.	H	4.87	1.79	7.18*
	L	5.29	1.54	10.08*
24. Counselors post/provide a list of key activities, fees, and other important postsecondary application information.	H	5.83	1.38	19.60*
	L	5.96	1.24	19.14*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 8

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Family Involvement Sub-category

Attributes	Performance Level	M	SD	t
25. Families are provided opportunities to learn about the postsecondary application process.	H	5.46	1.40	15.25*
	L	5.57	1.33	14.40*
26. Families are provided opportunities to become aware that postsecondary education is attainable for everyone.	H	5.42	1.44	14.39*
	L	5.53	1.33	14.00*
27. Families are encouraged to be actively involved in the high school completion and postsecondary application process.	H	5.48	1.48	14.63*
	L	5.70	1.32	15.50*
28. Families are aware of the resources available to support the postsecondary aspirations of students.	H	5.02	1.52	9.84*
	L	5.36	1.37	12.04*
29. Families are aware of the college application process, financial aid process (including FAFSA) and the timeliness associated with postsecondary applications.	H	5.19	1.48	11.77*
	L	5.50	1.41	12.89*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*$p < .05$

Table 9

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Faculty Involvement Sub-category

Attributes	Performance Level	M	SD	t
30. Teachers integrate information about postsecondary education into regular classroom activities.	H	4.90	1.47	9.15*
	L	5.39	1.28	13.22*
31. Teachers are up to date on important "postsecondary knowledge."	H	4.82	1.42	8.59*
	L	5.26	1.61	11.90*
32. Ongoing professional development allows teachers to be more active in preparing students for life.	H	4.62	1.73	5.37*
	L	5.29	1.35	9.73*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 10

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Postsecondary Partnerships Sub-category

Attributes	Performance Level	M	SD	t
33. Postsecondary institutions come to your school and provide information about their school.	H	5.92	1.42	20.18*
	L	5.98	1.35	17.76*
34. Students are provided the opportunity to attend college and career fairs.	H	6.10	1.28	24.40*
	L	6.30	1.03	27.05*
35. Students are provided the opportunity to go on a college visit.	H	5.83	1.40	19.42*
	L	6.20	1.06	25.19*
36. Students have the opportunity to take dual enrollment classes.	H	5.77	1.63	15.70*
	L	5.10	2.00	6.54*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 11

Educators' Perception of Level of College-going Culture in High- and Low-performing Schools for the Articulation Sub-category

Attributes	Performance Level	M	SD	t
37. Faculty is knowledgeable about the coursework/credits required for postsecondary participation.	H	5.44	1.43	14.92*
	L	5.64	1.27	15.76*
38. Faculty is engaged in ensuring students have completed coursework/credits needed for postsecondary participation.	H	5.27	1.51	12.43*
	L	5.72	1.29	16.10*
39. Postsecondary expectations are consistent throughout all classrooms and grade levels.	H	4.73	1.59	6.80*
	L	5.27	1.31	11.78*
40. Formal, planned activities (vertical teaming, curriculum mapping, etc.) occur between grade levels to ensure a smooth transition at each grade level.	H	4.57	1.90	4.43*
	L	5.05	1.70	7.54*

Note. N=372. CM=4.0. Scale: 1=Rarely True 4=Sometimes True 7=Usually True
*p < .05

Table 12

Educators' Perception of the Levels of College-going Culture in High- and Low-performing Schools by Subcategories and Total

	Performance				
Category/ Total	Level	M	SD	CM	t
College Talk	H	25.32	5.71	20	13.78*
	L	26.39	5.39	20	14.08*
Clear Expectations	H	28.64	5.03	20	25.17*
	L	29.08	5.17	20	21.22*
Information and Resources	H	28.30	5.37	20	22.94*
	L	29.71	4.98	20	23.56*
Testing and Curriculum	H	29.02	5.18	20	24.49*
	L	30.32	4.97	20	24.29*
Comprehensive Counseling	H	15.67	3.76	12	14.26*
	L	16.59	3.60	12	15.29*
Family Involvement	H	26.63	6.60	20	14.63*
	L	27.66	6.14	20	14.92*
Faculty Involvement	H	14.34	3.93	12	32.29*
	L	15.94	3.64	12	13.17*
Postsecondary Partnerships	H	23.57	4.46	16	24.49*
	L	23.54	4.23	16	21.18*
Articulation	H	20.00	5.30	16	11.04*
	L	21.71	4.58	16	15.06*
Total	H	209.92	36.21	156	19.70*
	L	221.68	34.84	156	20.91*

Note. N=372.
*$p < .05$

Level of College-going Culture by Demographic/Attribute Variables

The nine sub-category and total scores were analyzed to determine if there were differences in mean scores based on the demographic and attribute variables used in this study. The demographic and attribute variables included the educators' role within the school, educators' years of experience, educators' years teaching in their current school building, the schools' enrollment, the percentage of student's enrolled in AP courses, and percent of needy students enrolled in each school. Independent sample t-test and a between group analysis of variance (ANOVA) were used to investigate differences.

Role at school

An independent sample t-test was conducted to explore the differences in perceived levels of college-going culture for high- and low-performing schools and role at the school for each of the nine sub-categories and total. Significant differences ($p < .05$) were found for high-performing schools in testing and curriculum, family involvement, postsecondary partnerships, and total. Significant differences ($p < .05$) were found for low-performing schools in clear expectations, information and resources, testing and curriculum, and family involvement.

The following results were calculated for high-performing schools: for testing and curriculum teachers (M=28.74, SD=5.22) and counselors (M=33.08, SD=2.31); for family involvement teachers (M=26.27, SD=6.63) and counselors (M=31.62, SD=3.64); for postsecondary partnerships teachers (M=22.38, SD=4.49) and counselors (M=26.08, SD=3.23); and total teachers (M=208.26, SD=36.24), and counselors (M=233.50, SD=27.07). The following results for calculated for low-performing schools: for clear expectations teachers (M=26.20, SD=5.57) and counselors (M=27.26, SD=4.05); for information and resources

teachers (M=29.42, SD=5.20); for testing and curriculum teachers (M=30.01, SD=5.20) and counselors (M=32.16, SD=2.87); for family involvement teachers (M=27.16, SD=6.34) and counselors (M=30.84, SD=3.20). These data are presented in Table 13.

Table 13

Differences in Levels of Perceived College-going Culture in High- and Low-performing Schools Based on Role at School

	Performance	Teacher		Counselor		
Category/Total	Level	M	SD	M	SD	t
College Talk	H	25.19	5.77	27.45	4.41	-1.27
	L	26.20	5.57	27.26	4.05	-0.79
Clear	H	28.45	5.08	31.23	3.49	-1.99
Expectations	L	28.87	5.39	30.58	3.02	-2.02*
Info and	H	28.17	5.41	30.15	4.54	-1.29
Resources	L	29.42	5.20	31.37	2.81	-2.44*
Testing and	H	28.74	5.23	33.08	2.31	-5.65*
Curriculum	L	30.01	5.20	32.16	2.87	-2.63*
Comprehensive	H	15.55	3.76	17.23	3.59	-1.57
Counseling	L	16.47	3.67	17.32	3.37	-0.95
Family	H	26.27	6.63	31.62	3.64	-4.80*
Involvement	L	27.16	6.34	30.84	3.20	-3.96*
Faculty	H	14.28	3.98	15.00	3.03	-0.63
Involvement	L	15.96	3.69	15.47	3.44	0.54
Post.	H	23.38	4.49	26.08	3.23	-2.13*
Partnerships	L	23.45	4.13	23.89	5.00	-0.42
Articulation	H	19.96	5.33	20.17	4.76	-0.13
	L	21.58	4.76	22.37	3.34	-0.89
Total	H	208.26	36.24	233.50	27.07	-2.16*
	L	219.86	36.83	229.79	18.96	-1.74

Note. N=372.
*p < .05

Total years of teaching experience.

A one-way between groups analysis of variance (ANOVA) was conducted to explore the differences in perceived level of college-going culture in high and low performing schools and total years of teaching experience for each of the nine sub-categories and total. For purposes of analysis four groups were collapsed into three due to insufficient cell size. The less than one year and one to five years groups were combined resulting in the following groups: less than 5 years, 6-10 years, and 11 or more years total teaching experience. Significant differences at $p < .05$ were found in high-performing schools for clear expectations, information and resources, testing and curriculum, and postsecondary partnerships categories. No significant differences were found for the other five sub-categories and total. No significant differences were found for the low-performing schools.

The analysis of the clear expectations sub-category for high-performing schools yielded the following results: less than 5 years of total teaching experience (M=27.60, SD=5.41); 6-10 years of teaching experience (M=27.58, SD=6.27); and 11 or more years of teaching experience (M=29.39, SD=4.14). The effect size, calculated using eta squared, was .032. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups.

The analysis of the information and resources sub-category for high-performing schools yielded the following results: less than 5 years of total teaching experience (M=26.96, SD=6.30); 6-10 years of teaching experience (M=27.57, SD=5.89); and 11 or more years of teaching experience (M=29.05, SD=4.63). The effect size, calculated using eta squared, was .028. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups.

The analysis of the testing and curriculum sub-category yielded the following results: less than 5 years of total teaching experience (M=28.21, SD=5.21); 6-10 years of teaching experience (M=27.52, SD=6.12); and 11 or more years of teaching experience (M=29.97, SD=4.58). The effect size, calculated using eta squared, was .043. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the 6-10 years of experience group (M=27.52, SD=6.12) was significantly different from the 11 or more years of experience group (M=29.97, SD=4.58). The less than five years of experience (M=28.21, SD=5.21) was not significantly different from the 6-10 years of experience (M=27.52, SD=6.12) or the 11 or more years of experience group (M=29.97, SD=4.58).

The analysis of the postsecondary partnerships sub-category yielded the following results: less than 5 years of total teaching experience (M=22.37, SD=4.80); 6-10 years of teaching experience (M=22.57, SD=4.76); and 11 or more years of teaching experience (M=24.38, SD=4.05). The effect size, calculated using eta squared, was .045. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the lesson than 5 years' experience group (M=22.37, SD=4.80) and the 6-10 years of experience group (M=22.57, SD=4.76) was significantly different from the 11 or more years of experience group (M=24.38, SD=4.05). The less than five years of experience (M=22.37, SD=4.80) was not significantly different from the 6-10 years of experience (M=22.57, SD=4.76). These data are provided in Table 14.

Table 14

Differences in Levels of Perceived College-going Culture in High and Low-Performing Schools Based on Total Years of Teaching Experience

		Years of Teaching Experience						
	Performance	Less than 5		6 - 10		11 or more		
Category/Total	Level	M	SD	M	SD	M	SD	F
College Talk	H	26.41	5.95	24.90	6.49	25.76	5.29	0.43
	L	25.82	6.00	25.63	5.95	26.66	4.89	0.49
Clear Expectations	H	27.60	5.41	27.58	6.27	29.39	4.14	3.44*
	L	28.42	5.81	29.92	4.84	29.04	5.02	0.57
Info and Resources	H	26.96	6.30	27.57	5.89	29.05	4.63	3.15*
	L	29.03	5.63	30.60	4.52	29.58	4.88	0.71
Testing and Curriculum	H	28.21	5.21	27.52	6.12	29.97	4.58	4.40*
	L	28.72	5.95	29.78	4.52	30.97	4.59	2.50
Comprehensive Counseling	H	15.64	3.47	15.10	4.46	15.88	3.58	0.73
	L	17.12	3.35	16.83	2.99	16.18	3.87	0.91
Family Involvement	H	24.60	7.18	26.90	7.19	27.24	5.99	2.71
	L	26.82	7.17	27.65	4.87	27.86	6.09	0.33
Faculty Involvement	H	14.52	3.92	13.65	3.98	14.53	3.92	0.96
	L	16.26	3.55	15.44	3.71	15.79	3.66	0.39
Post. Partnerships	H	22.37	4.80	22.57	4.76	24.38	4.05	4.80*
	L	23.56	4.25	23.52	4.42	23.37	4.20	0.02
Articulation	H	19.72	5.52	19.29	5.90	20.35	4.96	0.75
	L	21.56	5.52	21.16	4.04	21.75	4.35	0.15
Total	H	201.65	36.97	206.78	43.20	214.05	32.37	1.76
	L	217.27	42.01	220.45	31.67	222.20	32.27	0.21

Note. N=372
*p < .05

Total years of teaching experience at current high school.

A one-way between groups analysis of variance (ANOVA) was conducted to explore the differences in perceived levels of college-going culture in low- and high-performing schools and total based on total years of teaching experience at their current school for each of the nine sub-category and total scores. Groups were collapsed from four to three because of inadequate cell size for the purpose of analysis. The less than one year and one to five years groups were combined resulting in the following groups: less than 5 years, 6-10 years, and 11 or more years of teaching experience at their current school. Differences in perceived levels of college-going culture based on total years of teaching experience at their current school were statistically significant at $p < .05$ in low-performing schools for college talk; in high-performing schools for college talk, information and resources, testing and curriculum, postsecondary participation, and total. These data are presented in Table 15.

The analysis of the low-performing school for the college talk sub-category produced the following results: less than 5 years of experience at current school (M=25.95, SD=5.51); 6-10 years of teaching experience at current school (M=24.68, SD=4.84); and 11 or more years of experience at current school (M=28.05, SD=4.98). The effect size, calculated using eta squared was .060. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the less than 6-10 years of experience group (M=24.68, SD=4.84) differed significantly from the 11 or more years of experience group (M=28.05, SD=4.98). The 5 years of experience group (M=25.95, SD=5.51) did not differ significantly from the less than 6-10 years of experience group (M=24.68, SD=4.84) or the 11 or more years of experience group (M=28.05, SD=4.98).

The analysis of the high-performing schools for the college talk sub-category produced the following: less than 5 years of experience at their current school (M=24.73, SD=6.08); 6-10

years of experience at their current school (M=27.52, SD=4.61); and 11 or more years of experience (M=24.54, SD=5.72). The effect size, calculated using eta squared was .043. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the 6-10 years of experience group (M=27.52, SD=4.61) differed significantly from the less than 5 years of experience group (M=24.73, SD=6.08) and from the 11 or more years of experience group (M=24.54, SD=5.72). The less than 5 years of experience group (M=24.73, SD=6.08) did not differ significantly from the 11 or more years of experience group (M=24.54, SD=5.72).

The analysis of the high-performing schools for the information and resources sub-category produced the following: less than 5 years of experience at their current school (M=27.30, SD=5.85); 6-10 years of experience at their current school (M= 29.04, SD=5.50); and 11 or more years of experience (M=29.15, SD=4.28). The effect size, calculated using eta squared was .028. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups.

The analysis of the high-performing schools for the testing and curriculum sub-category produced the following: less than 5 years of experience at their current school (M=28.01, SD=5.41); 6-10 years of experience at their current school (M=29.93, SD=5.07); and 11 or more years of experience (M=29.79, SD=4.79). The effect size, calculated using eta squared was .031. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups.

The analysis of the high-performing schools for the postsecondary sub-category produced the following: less than 5 years of experience at their current school (M=22.57, SD=4.74); 6-10 years of experience at their current school (M=23.84, SD=4.81); and 11 or more years of experience (M=24.59, SD=3.55). The effect size, calculated using eta squared was .041. Post-

hoc comparisons using the Tukey HSD test indicated that the mean score for the less than 5 years of experience group (M=22.57, SD=4.74) differed significantly from the 11 or more years of experience group (M=24.59, SD=3.55). The 6-10 years of experience group (M=23.84, SD=4.81) did not differ significantly from the less than 5 years of experience group M=22.57, SD=4.74) or the 11 or more years of experience group M=24.59, SD=3.55).

The following results were calculated for the total in the high-performing schools: less than 5 years teacher experience at their current school (M=201.54, SD=37.46); 6-10 years teaching experience at their current school (M=221.37, SD=34.38); and 11 or more years (M=212.59, SD=34.05). The effect size, calculated using eta squared was .047. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the less than 5 years of experience group (M=201.54, SD=37.46) differed significantly from the 6-10 years of experience group (M=221.37, SD=34.38). The 11 or more years of experience group (M=212.59, SD=34.05) did not differ significantly from the less than 5 years of experience group (M=201.54, SD=37.46) or the 6-10 years of experience group (M=221.37, SD=34.38).

Table 15

Differences in Levels of Perceived College-going Culture in High and Low-Performing Schools Based on Total Years of Teaching at Current School

		Years of Teaching Experience						
	Performance	Less than 5		6 - 10		11 or more		
Category/Total	Level	M	SD	M	SD	M	SD	F
College Talk	H	24.73	6.08	27.52	4.61	24.54	5.53	4.73*
	L	25.95	5.51	24.68	4.84	28.05	4.98	4.19*
Clear	H	27.78	5.38	29.13	5.43	29.42	4.00	2.46
Expectations	L	28.98	5.17	27.97	5.74	29.87	4.66	1.35
Info and	H	27.30	5.85	29.04	5.50	29.15	4.28	3.09*
Resources	L	29.57	5.07	28.76	5.25	30.32	4.69	0.96
Testing and	H	28.01	5.41	29.93	5.07	29.79	4.79	3.11*
Curriculum	L	29.60	5.09	29.60	5.04	31.50	4.68	2.16
Comprehensive	H	15.13	3.74	16.50	3.28	15.81	4.06	2.13
Counseling	L	16.64	3.20	16.42	3.53	16.39	4.22	0.07
Family	H	25.90	7.08	27.44	5.94	26.97	6.29	1.02
Involvement	L	26.82	6.56	27.65	4.31	28.51	6.58	1.00
Faculty	H	14.11	3.92	15.24	3.84	13.93	3.97	1.75
Involvement	L	15.98	3.61	15.24	3.24	16.17	3.84	0.69
Post. Partnerships	H	22.57	4.7	23.84	4.81	24.59	3.55	4.30*
	L	23.20	4.39	23.16	4.17	23.93	4.08	0.46
Articulation	H	19.37	5.62	21.59	5.18	19.76	4.77	2.78
	L	21.21	4.91	21.18	4.32	22.46	4.27	1.16
Total	H	201.54	37.46	221.37	34.38	212.59	34.05	4.22*
	L	217.15	36.63	218.85	26.13	227.00	36.18	0.97

Note. N=372.
*p < .05

School enrollment.

Differences in perceived levels of college-going culture in low- and high-performing schools and total student enrollment for each of the nine sub-category and total scores were also explored. For purposes of analysis in this study, the schools were organized in three equivalent groups based on enrollment. Group one had a total student enrollment of 234 – 658, group two had a total enrollment of 732 – 1088, and group three ranged from 1129 – 1893. An independent samples t-test was conducted for the low-performing schools because there were no responses in group 3. A one-way between groups analysis of variance (ANOVA) was conducted for the high-performing schools.

Differences in perceived levels of college-going culture in low-performing schools based on total student enrollment were statistically significant at $p < .05$ for clear expectations, information and resources, testing and curriculum, comprehensive counseling, family involvement, articulation, and the total. In low-performing schools, perceived levels of college-going culture tends to be higher in lower enrollment schools compared to medium enrollment schools. No statistically significant differences at $p < .05$ were found in perceived levels of college-going culture in high-performing schools based on total student enrollment. Therefore, in high-performing schools, enrollment doesn't make a difference in perceived levels of college-going culture.

The following results were calculated for the low-performing schools: clear expectations sub-category group one (M=30.36, SD=4.79) and group two (M=24.85, SD=4.05); information and resources sub-category group one (M=30.55, SD=4.63) and group two (M=27.03, SD=5.15); testing and curriculum sub-category group one (M=31.01, SD=4.59) and group two (M=28.24, SD=5.56); comprehensive counseling sub-category group one (M=17.03, SD=3.60) and group

two (M=15.18, SD=3.29); family involvement sub-category group one (M=28.59, SD=5.69) and group two (M=24.80, SD=6.69); articulation sub-category group one (M=22.32, SD=4.33) and group two (M=19.71, SD=4.87). The following results were calculated for the total for low-performing schools: group one (M=228.37, SD=31.38) and group two (M=199.00, SD=36.94). These data are presented in Table 16.

Percent of needy students.

Differences in perceived levels of college-going culture in low- and high-performing schools and percent of needy students for each of the nine sub-category and total scores was explored. Quartiles were calculated for purposes of analysis based on the percent needy. Percent needy for the least needy group ranged from 19.3% to 37.8%. Group two was from 42.2% to 45.7%, group three 48.7% to 54.1%, and the most needy group ranged from 57.2% to 86.7%. An independent samples t-test was conducted for the low-performing schools because there were no responses in groups one and group two. A one-way between groups analysis of variance (ANOVA) was conducted for the high-performing schools. There were no responses in group 4.

Differences in perceived levels of college-going culture in low-performing schools based on percent needy was statistically significant at $p < .05$ for family involvement. The following results were calculated for the family involvement sub-category for low-performing schools: Group three (M=29.11, SD=5.39) and group four (M=26.56, SD=6.48). No statistically significant differences at $p < .05$ were found in perceived levels of college-going culture in high-performing schools based on percent needy. These data are presented in Table 17.

Table 16

Differences in Levels of Perceived College-going Culture in High- and Low-performing Schools Based on Total School Enrollment

		Enrollment						
	Performance	234 – 658		733 – 1088		1129 – 1893		
Category/Total	Level	M	SD	M	SD	M	SD	F/t
College Talk	H	26.81	6.70	25.83	5.75	24.71	5.12	1.56
	L	26.71	5.52	25.20	4.77	-	-	1.37
Clear	H	27.94	3.82	28.56	5.43	28.80	4.90	0.22
Expectations	L	30.36	4.79	24.85	4.05	-	-	6.07*
Info and	H	30.31	3.77	28.01	5.67	28.25	5.31	1.26
Resources	L	30.55	4.63	27.03	5.15	-	-	3.82*
Testing and	H	30.67	36.8	29.17	4.70	28.69	5.65	1.02
Curriculum	L	31.01	4.59	28.24	5.56	-	-	2.90*
Comprehensive	H	16.3	3.36	15.47	3.53	15.76	4.01	0.27
Counseling	L	17.3	3.60	15.18	3.29	-	-	2.67*
Family	H	26.88	3.86	26.52	6.44	26.67	7.06	0.02
Involvement	L	28.59	5.69	24.80	6.69	-	-	3.28*
Faculty	H	14.00	3.43	14.31	4.02	14.40	3.95	0.07
Involvement	L	16.13	3.70	15.31	3.41	-	-	1.16
Post. Partnerships	H	21.92	4.89	23.44	4.60	23.86	4.30	1.17
	L	23.67	4.04	23.12	4.80	-	-	0.66
Articulation	H	20.19	4.55	19.76	5.82	20.15	5.01	0.14
	L	22.32	4.33	19.71	4.87	-	-	2.99*
Total	H	211.50	28.63	208.24	36.83	210.87	36.89	0.11
	L	228.37	31.38	199.00	36.94	-	-	4.18*

Note. N=372.
*p < .05

Table 17

Differences in Levels of Perceived College-going Culture in High and Low-Performing Schools Based on Percent Needy

		Percent Needy								
	Performance	19.3% - 37.8%		42.2% - 45.7%		48.7% - 54.1%		57.2% - 86.7%		
Category/Total	Level	M	SD	M	SD	M	SD	M	SD	F/t
College Talk	H	25.37	5.95	25.30	5.61	25.17	5.25	-	-	0.01
	L	-	-	-	-	25.75	5.78	26.92	5.02	-1.28
Clear Expectations	H	28.36	5.02	28.55	5.14	30.08	4.65	-	-	1.20
	L	-	-	-	-	29.75	5.63	28.55	4.75	1.39
Info and Resources	H	28.28	5.20	27.89	5.75	29.88	4.53	-	-	1.35
	L	-	-	-	-	30.21	5.39	29.33	4.64	1.06
Testing and Curriculum	H	28.93	5.40	28.70	5.38	30.52	3.09	-	-	1.13
	L	-	-	-	-	30.60	5.46	30.13	4.62	0.54
Comprehensive Counseling	H	15.50	3.96	15.82	3.81	15.83	2.65	-	-	0.18
	L	-	-	-	-	16.69	3.50	16.51	3.70	0.28
Family Involvement	H	26.40	6.51	26.46	7.16	28.21	4.52	-	-	0.78*
	L	-	-	-	-	29.11	5.39	26.56	6.48	2.51
Faculty Involvement	H	14.10	4.12	14.28	3.86	15.52	3.19	-	-	1.34
	L	-	-	-	-	15.37	3.79	16.39	3.48	-1.69
Post. Partnerships	H	23.68	4.32	22.98	4.94	25.16	2.67	-	-	2.39
	L	-	-	-	-	23.53	4.25	23.54	4.24	-0.01
Articulation	H	19.87	5.34	19.98	5.50	20.63	4.46	-	-	0.75
	L	-	-	-	-	21.63	4.43	21.78	4.73	-0.19
Total	H	207.80	37.12	209.83	37.58	218.48	26.77	-	-	0.72
	L	-	-	-	-	225.23	33.64	219.08	35.70	0.96

Note. N=372 *p < .05

Percent of students enrolled in AP courses.

An independent t-test was conducted to see if significant differences were found in perceived levels of college-going culture in low- and high-performing schools and percent of students enrolled in AP courses for each of the nine sub-category and total scores. For purposes of analysis in this study, the percent of students enrolled in AP courses was divided into two groups where the lowest and highest percentages were eliminated as outliers. Group one had 10.2% to 24.4% of students enrolled in AP courses. Group two ranged from 28.4% to 38.1%.

Differences in perceived levels of college-going culture in low-performing schools based on percent enrolled in AP courses were statistically significant at $p < .05$ for the clear expectations, information and resources, testing and curriculum, comprehensive counseling, and family involvement sub-categories. Differences in perceived levels of college-going culture in high-performing schools based on percent of students enrolled in AP course were significant for the testing and curriculum sub-category.

The following results were calculated for low-performing schools: clear expectations sub-category group one (M=28.54, SD=5.45) and group two (M=31.49, SD=3.76); information and resources sub-category group one (M=29.28, SD=5.20) and group two (M=31.63, SD=3.90); testing and curriculum sub-category group one (M=30.11, SD=5.16) and group two (M=31.90, SD=3.67); comprehensive counseling sub-category group one (M=16.36, SD=3.67) and group two (M=17.85, SD=3.09); family involvement sub-category group one (M=27.17, SD=6.41) and group two (M=29.70, SD=5.31). For the high-performing schools the testing and curriculum sub-

category, the mean for group one (M=30.01, SD=3.48) and group two (M=28.27, SD=5.87). These data are presented in Table 18.

Level of College-going Culture and College Enrollment Rate in Selected Low and High Performing High Schools.

Research question three was addressed using the findings for levels of college-going culture for the nine sub-categories and total and the school college enrollment rates. A Pearson product correlation coefficient was used to determine whether significant relationships existed between level of college-going culture for the nine sub-categories and total and school's college enrollment rates. Relationships were described on a scale of none to perfect using the categories (.00 = no relationship, .01 - .24 = weak, .25 - .49 = moderate, .50 - .74 = moderately strong, .75 - .99 = very strong, and 1.00 = perfect) identified by Holcomb (2006).

Correlation coefficients for high-performing schools ranged from -.062 for faculty involvement to .084 for testing and curriculum. The relationships between levels of college-going culture for the sub-categories and total and a school's college enrollment rate for high-performing schools were not found to be statistically significant ($p < .01$). Correlation coefficients for low-performing schools ranged from .140 for faculty involvement to .374 for total. The relationships between levels of college-going culture for the sub-categories and total and college enrollment rate for low-performing schools were found to be statistically significant ($p <. 01$) for all sub-categories and total except faculty involvement. Correlation mean and standard deviation totals are presented in Table 19. The correlations are included in Table 20.

Table 18

Differences in Levels of Perceived College-going Culture in High- and Low-performing Schools Based on Percent of Students Enrolled in AP Courses

		AP Enrollment				
	Performance	10.2% to 24.4%		28.4% to 38.1%		
Category/Total	Level	M	SD	M	SD	t
College Talk	H	25.82	5.58	25.08	5.82	0.89
	L	26.08	5.59	28.11	4.93	-1.89
Clear	H	28.61	5.18	28.59	5.05	0.01
Expectations	L	28.54	5.43	31.49	3.76	-2.97*
Info and	H	28.60	5.53	28.05	5.40	0.70
Resources	L	29.28	5.20	31.63	3.90	-2.44*
Testing and	H	30.01	3.48	28.27	5.87	2.57*
Curriculum	L	30.11	5.16	31.90	3.67	-2.14*
Comprehensive	H	15.9	3.13	16.07	4.04	-1.81
Counseling	L	16.36	3.66	17.85	3.09	-2.10*
Family	H	26.45	5.34	26.50	7.25	-0.05
Involvement	L	27.17	6.41	29.70	5.31	-2.05*
Faculty	H	14.35	3.69	14.34	4.06	0.01
Involvement	L	15.71	3.70	16.91	3.51	-1.68
Post.	H	23.34	4.75	23.51	4.33	-0.25
Partnerships	L	24.06	4.13	22.56	4.52	1.74
Articulation	H	19.71	5.47	20.32	5.19	-0.80
	L	21.43	4.77	22.77	4.29	-1.47
Total	H	209.13	30.53	209.91	39.19	-0.13
	L	219.80	36.18	232.17	30.01	-1.65

Note. N=372.
*p < .05

Table 19

Correlation Mean and Standard Deviation for College Enrollment Rate and Levels of College-going Culture by Subcategories and Total

Category/ Total	Performance Level	M	SD
College Talk	H	25.32	5.71
	L	26.39	5.39
Clear Expectations	H	28.64	5.03
	L	29.08	5.17
Information and Resources	H	28.30	5.37
	L	29.71	4.98
Testing and Curriculum	H	29.02	5.18
	L	30.32	4.97
Comprehensive Counseling	H	15.67	3.76
	L	16.59	3.60
Family Involvement	H	26.63	6.60
	L	27.66	6.14
Faculty Involvement	H	14.34	3.93
	L	15.94	3.64
Postsecondary Partnerships	H	23.57	4.46
	L	23.54	4.23
Articulation	H	20.00	5.30
	L	21.71	4.58
Total	H	209.92	36.21
	L	221.68	34.84

Note. N=372

Table 20

Pearson Correlation Between College Enrollment Rate and Levels of College-going Culture Subcategories and Total

Category/ Total	Performance Level	1	2	3	4	5	6	7	8	9	10
College Talk	H	.065									
	L	.257*									
Clear Expectations	H		-.015								
	L		.298*								
Information and Resources	H			.036							
	L			.324*							
Testing and Curriculum	H				.084						
	L				.344*						
Comprehensive Counseling	H					.020					
	L					.225*					
Family Involvement	H						.081				
	L						.246*				
Faculty Involvement	H							-.062			
	L							.140			
Postsecondary Partnerships	H								-.038		
	L								.251*		
Articulation	H									-.036	
	L									.233*	
Total	H										-.028
	L										.374*

Note. N=372. *p > .01

Ancillary Findings

This section presents the ancillary findings from the study. The *Principles of a College-going Culture* survey was used to collect demographic and the perception of the levels of college-going culture. Using the college-enrollment data along with data from the survey, an independent sample t-test was used to determine whether a significant differences were found in perceived levels of college-going culture and low- and high-performing schools for each of the nine sub-categories and total scores. For purposes of analysis two groups were created. Group one, low-performing schools, had a college enrollment rate from 28.1% - 45.0%. Group two, high-performing schools, had college enrollment rate from 65.0% - 80.6%.

Significant differences ($p > .05$) were found for five of the nine sub-categories and the total. For information and resources, group one (M=29.71, SD=4.98) and group two (M=28.30, SD=5.37); for testing and curriculum, group one (M=30.32, SD=4.97) and group two (29.02, SD=5.18); for comprehensive counseling, group one (M=16.59, SD=3.60) group two (M=15.67, SD=3.76); for faculty involvement, group one (M=15.94, SD=3.64) and group two (M=14.34, SD=3.93); for articulation, group one (M=21.71, SD=4.58) and group two (M=20.00, SD=5.30); and for the total group 1 (M=221.68, SD=34.84) and group two (M=209.92, SD=36.21). These data are presented in Table 21.

Table 21

Differences in Levels of Perceived College-going Culture Based on College Enrollment Rate in High- and Low-performing Schools

	College Enrollment Rate				
	28.1% - 45.0%		65.0% - 80.6%		
Category/Total	M	SD	M	SD	t
College Talk	26.39	5.39	25.32	5.71	1.77
Clear Expectations	29.08	5.17	28.64	5.03	0.80
Info and Resources	29.71	4.98	28.30	5.37	2.52*
Testing and Curriculum	30.32	4.97	29.02	5.18	2.30*
Comprehensive Counseling	16.59	3.60	15.67	3.76	2.31*
Family Involvement	27.66	6.14	26.63	6.60	1.49
Faculty Involvement	15.94	3.64	14.34	3.93	3.95*
Post. Partnerships	23.54	4.23	23.57	4.46	-0.06
Articulation	21.71	4.58	20.00	5.30	3.19*
Total	221.68	34.84	209.92	36.21	2.80*

Note. N=372.
*p > .05

Instrument Reliability

The reliability of both the total level college-going culture score and the sub-categories scores were assessed for the adapted survey instrument using the Cronbach's Alpha coefficient scale. The alpha coefficients for the levels of college-going culture sub-categories and the total were calculated. Reliability of the instrument was described according to the levels of acceptability by George and Mallery (2003): "> .9 – Excellent, >.8 – Good, > .7 – Acceptable, > .6 – Questionable, > .5 – Poor, and < .5 – Unacceptable" (p. 231). These data are provided in Table 21.

The internal consistency for the levels of ability for the sub-categories ranged from a high of .954 (M=214.78, SD=36.06) for family involvement to a low of .746 (M=23.56,

SD=4.36) for postsecondary partnerships. The internal consistency for the total score was .964 (M=214.78, SD=36.06). These alpha coefficients indicate an acceptable level (above .7) for two sub-categories (comprehensive counseling, postsecondary partnerships) and a good level (above .8) for six sub-categories (college talk, clear expectations, information and resources, testing and curriculum, faculty involvement, and articulation) and an excellent level of reliability (above .9) for one category (family involvement). The internal consistency for the total instrument suggests an excellent level of reliability (above .9) overall for the scale (George & Mallery, 2003).

Table 22

Cronbach's Alpha Coefficient for Instrument Reliability

Category/ Total	n scale items	M	SD	Alpha Coefficient
College Talk	5	25.74	5.61	.867
Clear Expectations	5	28.81	5.09	.817
Information and Resources	5	28.86	5.26	.815
Testing and Curriculum	5	29.55	5.13	.828
Comprehensive Counseling	3	16.04	3.72	.757
Family Involvement	4	27.05	6.43	.945
Faculty Involvement	3	14.98	3.89	.820
Postsecondary Partnerships	4	23.56	4.36	.746
Articulation	4	20.69	5.08	.837
Total	39	214.78	36.06	.964

N=372

Summary of Findings

The purpose of this chapter was to present the data gathered for a study examining the level of college-going culture as perceived by teachers and counselors in selected West Virginia schools. Respondents were asked to respond to three items that provided demographic information. The demographic questions included participant role in the

building, the total numbers of years of teaching experience, and the total number of years teaching at their current school. The respondents were also asked to rate their perception of the levels of college-going culture using a 39 item, Likert survey. The survey items represented nine sub-categories of college-going culture with three to five questions each.

In general, teachers and counselors described their perception of the level of college-going culture based on the 39 attributes as sometimes true to usually true. Statistically significant differences were found between teachers and counselors for clear expectations (p=.001), information and resources (p=.003), testing and curriculum (p=.000), comprehensive counseling (p=.045), and the total (p=.000). Overall, counselors reported higher levels than teachers in each category and the total.

Statistically significant differences were found for high-performing schools for clear expectations (p=.034), information and resources (p=.045), testing and curriculum (p=.014), and postsecondary partnerships (p=.009) based on years of teaching experience. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups for clear expectations and information and resources. For testing and curriculum and postsecondary partnerships in high-performing schools the more years teaching experience, the higher the perceived levels of a college-going culture.

Statistically significant differences were found in high-performing schools for college talk (p=.010), information and resources (p=.047), testing and curriculum (p=.047), postsecondary partnerships (p=.015), and total (p=.016) based on years of experience teaching the current school. For low-performing schools statistically significant differences were found for the college talk (p=.017) sub-category. Although, post-hoc comparisons did not isolate any statistically significant difference among the three groups for information and resources and testing and curriculum, in terms of these 5 sub-categories and total for high-

performing schools the more years of experience teaching at their current school the higher the perceived level of college-going culture.

Analysis of school enrollment found statistically significant differences between low enrollment (234 – 658) and middle enrollment (733 – 1088) groups for low-performing schools. Statistically significant differences were found for clear expectations (p=.000), information and resources (p=.000), testing and curriculum (p=.004), comprehensive counseling (p=.008), family involvement (p=.001), articulation (p=.003), and total (p=.000). In terms of these 6 sub-categories and total for low-performing schools, the smaller the school the higher the perceived level of college-going culture.

Statistically significant differences were not found for high-performing schools based on percent needy. In low-performing schools statistical significant differences were found for family involvement (p=.013). For family involvement the higher the percent needy the lower the perceived level of college-going culture.

Analysis of AP enrollment found statistically significant differences were found for high-performing schools for testing and curriculum (p=.011); for low-performing schools for clear expectations (p=.004), information and resources (p=.016), testing and curriculum (p=.036), comprehensive counseling (p=.038), and family involvement (p=.043). In low-performing schools for these 5 sub-categories, the more students enrolled in AP courses the higher the perceived level of college-going culture.

Pearson correlation coefficients revealed statistically significant ($p<.001$) relationship for low-performing schools between the levels of college-going culture and a school's college enrollment rate for all sub-categories and total except faculty involvement. The relationship between the between the levels of college-going culture and a school's college enrollment for comprehensive counseling and articulation was weak; college talk, clear expectations,

information and resources, testing and curriculum, family involvement, postsecondary partnerships, and total were moderate. No statistically significant relationships were determined for high-performing schools between the levels of college-going culture and a school's college enrollment for any of the nine sub-categories or total.

Cronbach's alpha results indicate an excellent level of reliability overall for the survey instrument. Coefficients indicate an acceptable level (above .7) for two sub-categories (comprehensive counseling, postsecondary partnerships) and a good level (above .8) for six sub-categories (college talk, clear expectations, information and resources, testing and curriculum, faculty involvement, and articulation) and an excellent level of reliability (above .9) for one category (family involvement).

Chapter Five: Conclusions, Implications, and Recommendations

This chapter begins with a review of the study's purpose, methods used, and demographic data collected. Summaries of research findings follow. Study conclusions, discussion and implications, and recommendations for further research complete the chapter.

Purpose of the Study

The primary purpose of this study was to examine the level of college-going culture as perceived by teachers and counselors in selected West Virginia schools. The study also sought to determine if there were differences in the level of implementation of school college-going culture based on selected independent variables. Finally, the study sought to identify the relationship between the level of college going culture and college enrollment rate in this same group of schools.

Research questions that guided the study were:

1. What is the level of school college-going culture as perceived by counselors and teachers in selected low and high performing West Virginia high schools?
2. What are the differences, if any, in the level of school college-going culture in selected low and high performing high schools based on total years teaching experience, total years teaching at current school, school enrollment, percent needy students enrolled, and access to rigorous curriculum?
3. What is the relationship, if any, in the level of school college-going culture and college enrollment rate in selected low and high performing high schools?

Methods

A quantitative research design was used to study a populations of high school teachers and counselors from 36 West Virginia high schools. The high schools with 18 highest and 18 lowest college enrollment rates averaged from the graduating classes of 2009,

2010, 2011 and 2012 were selected using college-going data from the West Virginia Higher Education Policy Commission.

The survey instrument was created based on the Nine Principles of a College-Going Culture Theory by McDonough (1997). The survey instrument is a three-page, researcher developed questionnaire based on the nine principles outlined in McDonough's theory (see Appendix B) which consists of two parts. The first part has two demographic questions related to years of experience and years teaching at current school. The second part consists of a seven point scale to indicate their perception of the level of implementation of a college-going culture at their school. Each of the nine principles is represented by 3-5 questions totaling 39 questions. A draft of the instrument was reviewed by a panel of experts (3-5 people) who understand school culture to ensure content validity. The draft was also pilot tested; the instrument was administered to three to five individuals representative of the study population. Three hundred and seventy two responses were received from the 21 schools.

Demographics

Ninety-one percent of the respondents indicated they were teachers and 8.7% reported they were administrators/counselors. A little more than one fifth (21.8%) of the educators had 0 – 5 years of teaching experience. Twenty-one percent had 6 – 10 years of experience, while 57.2% had 11 or more years of teaching experience. When the respondents were asked how many years they had taught at their current school, 45.2% reported being there 1-5 years, while 22.9% reported 6-10 years, and 32% reported 11 or more years.

Summary of Findings

In general, teachers and counselors described their perception of the level of college-going culture based on the 39 attributes as sometimes true to usually true. Statistically significant differences were found between teachers and counselors for clear expectations

(p=.001), information and resources (p=.003), testing and curriculum (p=.000), comprehensive counseling (p=.045), and the total (p=.000). Overall, counselors reported higher levels than teachers in each category and the total.

Statistically significant differences were found for high-performing schools for clear expectations (p=.034), information and resources (p=.045), testing and curriculum (p=.014), and postsecondary partnerships (p=.009) based on years of teaching experience. Post-hoc comparisons using the Tukey HSD test did not isolate any statistically significant difference among the three groups for clear expectations and information and resources. For testing and curriculum and postsecondary partnerships in high-performing schools the more years teaching experience, the higher the perceived levels of a college-going culture.

Statistically significant differences were found in high-performing schools for college talk (p=.010), information and resources (p=.047), testing and curriculum (p=.047), postsecondary partnerships (p=.015), and total (p=.016) based on years of experience teaching the current school. For low-performing schools statistically significant differences were found for the college talk (p=.017) sub-category. Although, post-hoc comparisons did not isolate any statistically significant difference among the three groups for information and resources and testing and curriculum, in terms of these 5 sub-categories and total for high-performing schools the more years of experience teaching at their current school the higher the perceived level of college-going culture.

Analysis of school enrollment found statistically significant differences between low enrollment (234 – 658) and middle enrollment (733 – 1088) groups for low-performing schools. Statistically significant differences were found for clear expectations (p=.000), information and resources (p=.000), testing and curriculum (p=.004), comprehensive counseling (p=.008), family involvement (p=.001), articulation (p=.003), and total (p=.000).

In terms of these 6 sub-categories and total for low-performing schools, the smaller the school the higher the perceived level of college-going culture.

Statistically significant differences were not found for high-performing schools based on percent needy. In low-performing schools statistical significant differences were found for family involvement (p=.013). For family involvement the higher the percent needy the lower the perceived level of college-going culture.

Analysis of AP enrollment found statistically significant differences were found for high-performing schools for testing and curriculum (p=.011); for low-performing schools for clear expectations (p=.004), information and resources (p=.016), testing and curriculum (p=.036), comprehensive counseling (p=.038), and family involvement (p=.043). In low-performing schools for these 5 sub-categories, the more students enrolled in AP courses the higher the perceived level of college-going culture.

Pearson correlation coefficients revealed statistically significant ($p<.001$) relationship for low-performing schools between the levels of college-going culture and a school's college enrollment rate for all sub-categories and total except faculty involvement. The relationship between the between the levels of college-going culture and a school's college enrollment for comprehensive counseling and articulation was weak; college talk, clear expectations, information and resources, testing and curriculum, family involvement, postsecondary partnerships, and total were moderate. No statistically significant relationships were determined for high-performing schools between the levels of college-going culture and a school's college enrollment for any of the nine sub-categories or total.

Conclusions

The analysis of data collected for this study provided sufficient evidence to support the following conclusions.

Research Question One: What is the level of school college-going culture as perceived by counselors and teachers in selected low and high performing West Virginia high schools?

Overall, the existence of attributes of college-going culture were described as being between sometimes and usually true for teachers and counselors. This pattern was consistent across the 39 attributes, nine sub-categories, and total. Individual attribute responses ranged from a low mean of 4.22 to a high of 6.48 on a seven-point scale where 4.0 = sometimes true and 7.0 = usually true. Low-performing schools reported higher level os college-going culture scores for 35 of the 39 individual attributes, eight of the nine sub-categories, and the total score.

Research Question Two: What are the differences, if any, in the level of school college-going culture in selected low and high performing high schools based on total years teaching experience, total years teaching at current school, school enrollment, percent needy students enrolled, and access to rigorous curriculum?

Years of Teaching Experience. Overall, Years of teaching experience do not have an effect on perceived levels of college-going culture in high- or low-performing schools. No statistically significant differences were found in the levels of school college-going culture for low-performing schools based on years of teaching experience. Four sub-categories (clear expectations, information and resources, testing and curriculum, and postsecondary partnerships) were found to be statistically significant for high-performing schools based on years of teaching experience.

Years of Teaching Experience at Current School. Overall, years of teaching experience at current school do not have an effect on the perceived level of college-going culture in high- or low-performing schools. College talk was the only sub-category that was

statistically significant for years at current school in low-performing schools. Two sub-categories (college-talk and postsecondary partnerships) and the total were found to be statistically significant based on years at current school in high-performing schools.

School enrollment. Overall, the smaller the enrollment the higher the perceived level of college-going culture in low-performing schools. Statistically significant differences were found based on enrollment for low-performing schools in six sub-categories (clear expectations, information and resources, testing and curriculum, comprehensive counseling, family involvement, and articulation) and the total. No statistically significant differences were found in the levels of school college-going culture for high-performing schools based on school enrollment. There is not an effect on perceived levels of college-going culture in high-performing schools based on school enrollment.

Percent Needy. Overall, percent needy does not have an effect on the perceived level of college-going culture in high- or low-performing schools. One sub-category (family involvement) was statistically significant for percent needy for low-performing schools. No statistically significant differences were found in the levels of school college-going culture for high-performing schools based on school percent needy.

Percent of Students Enrolled in AP courses. Overall, access to a rigorous curriculum does not have an effect on the perceived levels of college-going culture in high- and low-performing schools. One sub-category (testing and curriculum) was statistically significant based on percent of students enrolled in AP courses for high-performing schools. For low-performing schools five sub-categories (clear expectations, information and resources, testing and curriculum, comprehensive counseling, and family involvement) were found to be statistically significant based on students enrolled in AP courses.

Research Question Three: What is the relationship, if any, in the level of school college-going culture and college enrollment rate in selected low and high performing high schools?

Overall, there is not a statistically significant relationship in level of college-going culture and college enrollment rate for high-performing schools. For low-performing schools, a positive, statistically significant, and moderate relationship exists for all sub-categories and total. The relationship between the level of school college-going culture and college enrollment rates of high-performing schools that participated in this study was weak and not statistically significant. This result was consistent for the relationship between the nine sub-categories as well. The relationship for low-performing schools was statistically significant and moderate. This result was consistent for the relationship between the eight of the nine sub-categories which were weak to moderate and statistically significant. Therefore, there is not a relationship between college enrollment rate and perceived levels of college-going culture in high- or low-performing schools.

Conclusions from Ancillary Findings

Overall, low-performing schools have a higher level of perceived college-going culture than high-performing schools. Statistically significant differences were found for five of the sub-categories (information and resources, testing and curriculum, comprehensive counseling, faculty involvement, and articulation) and total.

Discussion and Implications

The findings of this study indicated that counselors have a higher level of perceived college-going culture than teachers in all sub-categories and the total. This study also found that the attributes selected did not make a difference on the perceived levels of college-going culture for high-performing schools. The only attribute that was found to be statistically

significant for low-performing schools was school enrollment. However, although only four sub-categories were found to be statistically significant for high-performing schools based on total years of teaching experience all but one of the sub-categories and total did result in higher level of perceived college-going culture with increased years' experience. This could imply that increased years' experience could be related to increased perception of college-going culture. McDonough (2004) argued that formal and informal communication related to college choice was necessary to build a strong college culture. Faculty involvement that includes a staff devoted to promoting higher education as well as being available to advise students and act as college counselors is imperative.

Furthermore, this study found that no statistically significant relationship for high-performing schools exists between perceived levels of college-going culture and college enrollment rates. Although, the study found that there was a statistically significant relationship between perceived levels of college-going culture and college enrollment rates for low-performing schools it was weak to moderate. However, existing evidence has identified several high school attributes that influence college-going rates. For instance, access to a rigorous curriculum, the average number of AP courses offered at a high school (Engberg and Wolniak, 2010), the average SES of a high school (Hill, 2008), and the extent of teacher involvement in promoting college-going (Roderick et al., 2011) can influence whether students plan to apply and eventually enroll in college.

Similar to the findings in this study for high-performing schools, other quantitative studies have not found significant effects between teacher-student ratio (school enrollment) and students enrolling at either two- or four-year institutions (Engberg & Wolniak, 2010; Nuñez & Kim, 2012). However, this study did find that the lower the school enrollment the higher the perceived level of college-going culture for all sub-categories and total for low-performing schools. Additionally, although none of the sub-categories or total were

statistically significant for high-performing schools, the lower enrollment schools reported a higher perceived level of college-going culture for all but three sub-categories. Comparing the number of staff to student enrollment for schools in this study, overall low-performing schools had a lower staff to student ratio than high-performing schools. McKillip, Godfrey, and Rawls (2012) argue that relationships between students and teachers are the foundation of a school's college-going culture. There must be an expectation that all students will attend some form of postsecondary school and it is part of their role as a teacher to provide resources and ensure this happens.

Hill (2008) found that the larger the school the more likely students were to enroll at four-year institutions is decreased as compared to two-year institutions. The number of counselors ensuring students receive adequate support for their postsecondary aspirations matters (McDonough, 1997). Cuellar, Chung, and Lucido (2012) assert that regardless of the inconclusive empirical evidence accounting for the teacher-student ratio, it may affect the overall college-going culture. If a limited number of teachers are available to help guide students through the college application process it could have a negative effect on the college-going culture because teacher involvement in college planning promotes a strong college culture.

This study did not find significant differences in perceived levels of college-going culture in high- and low-performing schools based on percent needy. However, for the 48.7% - 54.1% group higher levels of perceived college-going culture were reported for all sub-categories and the total except one in high-performing schools. In low-performing schools, higher levels were reported in the same group for all sub-categories and total except three. This is contrary to several studies that suggest that socioeconomic status is associated with college enrollment. Klugman (2011) found that high-SES students attend high schools that offer more AP and IB subjects, more extracurricular activities, and have more social

resources. Plank and Jordan (2001) found that as levels of socioeconomic status increased so did college enrollment. The higher level of SES the more likely students would enroll in selective, four-year institutions.

The average level of socioeconomic status of an entire school can influence students' postsecondary enrollment (Engberg & Wolniak, 2010). School resources differ among high and low SES schools and inequalities in programs, pedagogy, and social resources exist (Klugman, 2011). Although most early studies find school resources measured as average school SES play a very small role in college enrollment (Alwin and Otto, 1977; Meyer, 1970), more recent studies suggest that attending an affluent high school can increase the chances a student will enroll in a four-year institution (Engberg & Wolniak, 2010). Furthermore, Klugman (2011) found that high school resources can significantly offset the effect of family SES on school choice. Therefore, work should be done to ensure equitable college access resources are available in all schools not just those with high level of SES.

This study took academic rigor into consideration by looking at the AP course seat count by enrollment. For low-performing schools five sub-categories were statistically significant and all but one sub-category did result in higher perceived levels of college-going culture with increased AP enrollment. Although, there was no significant differences found for high- and low-performing schools perceived levels of college-going culture, academic achievement variables have consistently been found to increase the likelihood of college enrollment (Perna & Titus, 2005). Academic achievement variables tend to have the greatest influence on both two- and four-year college enrollment. It has consistently been shown to link high school to college matriculation (Engberg & Woniak, 2010). These variables include course-taking patterns, school grade point average, highest math course taken, AP/IB exams, etc. Engberg & Wolniak (2010) point out few studies have operationalized student achievement using a combination of these variables, including this study. Looking at course

taking patterns, highest math course taken, and GPA or some combination of the three may offer insight into how to academic achievement influences college enrollment. By better understanding its effects on college enrollment, programmatic offerings could be altered to enhance the academic achievement of more students.

Another variable that was not looked at in this study was parents' and family members' aspirations for the student to enroll in college. Students with average academic achievement combined with parents and a peer group that encourages them to enroll in college increases the likelihood the student will enroll in a four-year institution (Engberg & Wolnaik, 2010; Perna & Titus, 2005). All of these school-level effects, overall school SES, academic achievement variables, and peer networks, suggest that differences between schools and differences within schools could have an effect on students' choice of college and enrollment.

Linked Learning is an educational strategy that according to the Alliance for Excellent Education (2014) increases the number of high school graduates and postsecondary enrollees. These students earn more credits in the first two year of high school and were on track to complete college admissions requirements as compared to similar students. Linked Learning students also graduate high school at higher rates than other California students statewide. Their alumni were also more likely to attend a postsecondary institution (Alliance for Excellent Education, 2014).

Linked Learning includes four elements that are grounded in research (Alliance for Excellent Education, 2014). First, a rigorous curriculum that includes college prep English, math, science, history, and foreign language for all students. Second, technical skills courses that help student gain skills and knowledge based on a challenging career. Third, is work-based learning that includes mentors, job shadowing, internships, and apprenticeships. Lastly, Linked Learning includes personalized support. Those services include expanded

counseling and supplemental instruction that ensures mastery of academic subjects (Alliance for Excellent Education, 2014). Three of the four element of Linked Learning was not incorporated into this study. Work based learning, personalized support, and increasing exposure to technical education may help students choose a postsecondary path that is aligned with their strengths.

This study only measures teacher and counselor perceptions of a college-going culture. Belasco (2013) found that student who seek out their counselor in 10th and 12th grade were more likely to enroll in a 4-year college as compared to those who only visited their counselor once. Furthermore, Belasco's (2013) study indicates, especially for low-income students, counselors make a significant contribution to the college enrollment of high school students. Therefore, one could speculate that counselors' perceptions of the college-going culture could be very high especially when students seek them out for college knowledge daily.

Students' perceptions of the college-going culture could be a useful indicator to help capture a more comprehensive look at the school environment. The Center for American Progress recently published an article calling for the development of more surveys that capture student perspectives on their educational experiences (Boser & Rosenthal, 2012). According to national student survey data, students report their school work is too easy and they are not very engaged. Emerging from the surveys were clear gaps of levels of engagement as well as levels of understanding between those who are lower income as compared to their higher level income counterparts (Boser & Rosenthal, 2012).

Boser and Rosenthal (2012) continue that students' perspectives are necessary as we look to provide them with rigorous learning opportunities that are appropriate and engaging. They suggest that student surveys can offer insight into teacher effectiveness and provide valuable data on how classrooms can be enhanced and student achievement improved.

Cuellar, Chung, and Lucido (2012) propose taking a holistic approach to evaluating a school's college-going culture by looking at the school environment, student attitudes, and student behaviors. If a school environment supports students through the college application process and the assessment of students' views align, an effective college-going culture exists. Therefore, to fully evaluate the level of college-going culture in a school it's important to include the student view (Cuellar, Chung, and Lucido, 2012).

Recommendations for Further Research

The study investigated the level of college-going culture as perceived by teachers and counselors in selected high- and low-performing West Virginia schools. The study also looked at the differences in the level of implementation of school college-going culture based on selected independent variables. Finally, the study sought to identify the relationship between the level of college going culture and college enrollment rate in this same group of schools. Based on study findings, the following recommendations for further research are provided:

1. This study focused on 21 high- and low- performing schools in West Virginia. Expanding the study to include a larger population may provide additional data that would support general conclusions and implications regarding levels of college-going culture.
2. This study also focus on teachers' and counselors' perceptions. Expanding this study to include a larger population such as the administration, entire school staff, and students may provide data that would support general conclusions and implications regarding the levels of college-going culture.
3. Findings from this study indicated that school enrollment made a difference in the perceived level of college-gong culture in low-performing schools. Additional

research seeking to confirm or deny this effect would provide important insight into how schools promote college access.

4. The research indicates that socioeconomic status and average number of AP courses offered are associated with college-enrollment. Although this study did not reveal those as statistically significant attributes, conducting a mixed methods study to further explore these areas could help confirm or deny this effect.
5. In this study we looked at high- and low-performing schools based on school enrollment. Findings indicated that school enrollment made a difference in the perceived level of college-gong culture in low-performing schools but not in high-performing schools. However, Engberg and Wolnaik (2010) suggest that student-teacher ratio may have an effect on college-going culture and Roderick et al. (2011) extent of teacher involvement in promoting college-going can highly influence students. Additional research could confirm or deny the effect student-teacher ratio and level teacher involvement in college application process has on student enrollment.

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Appendix A: Selected High Schools and Number of Teachers and Counselors

School	Number of Classroom Teachers	Number of Counselors	High-Performing (HP) or Low-Performing (LP)
Mount View High School	57	3	LP
Liberty High School (Raleigh)	41	2	LP
Union Educational Complex	20	1	LP
Big Creek/Iaeger (River View)	38	2	LP
Braxton County	41	2	LP
Tug Valley	32	2	LP
Montcalm	23	1	LP
Meadow Bridge	18	1	LP
Independence	50	2	LP
Richwood	25	1	LP
Clay County	42	1	LP
Midland Trail	23	1	LP
Doddridge County	31	1	LP
Westside	35	2	LP
Pikeview	39	1	LP
South Charleston	58	4	HP
Parkersburg	108	5	HP
Williamstown	43	2	HP
Wheeling Park	123	5	HP
George Washington	54	4	HP
University	80	4	HP
Frankfort	39	2	HP
Hurricane	73	5	HP
Weir	43	2	HP
Fairmont Senior	44	2	HP
Morgantown	92	4	HP
Nitro	45	3	HP
Pickens	7	0	HP
Winfield	58	3	HP
Bridgeport	51	2	HP

Appendix B: Survey Instrument

Principles of a College Going Culture

Part A: Directions

Please answer the following questions:

1. What is your role at school (teacher, counselor, etc)?

___ a. Teacher ___ b. Counselor ___ c. Other (Please specify_____)

2. Years of experience (*check one)*:

___ a. <1 ___ b. 1 – 5 ___ c. 6 – 10 ___ d. 11 or more

3. Years at current school:

___ a. <1 ___ b. 1 – 5 ___ c. 6 – 10 ___ d. 11 or more

Part B: Directions

Using the scale provided, circle the response that best describes the extent to which each statement is true about your school.

1=Rarely True 4=Sometimes True 7=Usually True

	College Talk	Rarely			Some times			Usually
1	Conversations about educational options for students after high school are ongoing.	1	2	3	4	5	6	7
2	Conversations about educational options are initiated by the majority of school faculty.	1	2	3	4	5	6	7
3	School faculty share stories and information about their postsecondary journey with students.	1	2	3	4	5	6	7
4	Messages about college as something attainable are communicated verbally by faculty.	1	2	3	4	5	6	7
5	Teachers connect the subject matter they teach to educational options, potential college majors, and/or possible careers.	1	2	3	4	5	6	7
	Clear Expectations	**Rarely**			**Some times**			**Usually**
6	Expectations of what it takes to be prepared for postsecondary education are a part of the daily school culture.	1	2	3	4	5	6	7
7	All students are expected to be prepared to succeed in post secondary education.	1	2	3	4	5	6	7
8	Families understand that all students are expected to be prepared for postsecondary education.	1	2	3	4	5	6	7
9	Students are aware of the full range of options they might pursue after high school.	1	2	3	4	5	6	7
10	Students know the key activities (coursework, community service, etc.) they must complete in order to graduate from high school.	1	2	3	4	5	6	7

	Information and Resources	Rarely			Some times			Usually
11	Current information about postsecondary options and financial aid are readily accessible to students and families (space in the counseling center, information on school website, etc).	1	2	3	4	5	6	7
12	Information related to the key steps in the postsecondary application process (ACT/SAT test dates, scholarships, financial aid, etc.) is regularly updated and visible throughout the school.	1	2	3	4	5	6	7
13	Students are aware of career options available those **with** a college degree.	1	2	3	4	5	6	7
14	Students are aware of career options available to those **without** a college degree.	1	2	3	4	5	6	7
15	Resources (internet access, lab time, etc) are provided so that all students can explore postsecondary options and information online.	1	2	3	4	5	6	7
	Testing and Curriculum	Rarely			Some times			Usually
16	Teachers and counselors discuss the importance of standardized tests (PLAN, PSAT, ACT, and SAT) for college admissions.	1	2	3	4	5	6	7
17	Teachers and counselors help students understand the meaning of the scores they receive on standardized tests.	1	2	3	4	5	6	7
18	Standardized test dates and deadlines are promoted throughout the building.	1	2	3	4	5	6	7
19	All students have the opportunity to take the ACT and SAT regardless of cost (fee waivers provided).	1	2	3	4	5	6	7
20	Students have access to rigorous postsecondary-preparatory coursework like AP classes, dual enrollment classes, etc.	1	2	3	4	5	6	7
	Comprehensive Counseling	Rarely			Some times			Usually
22	Faculty members serve as resources for the latest “college knowledge” information.	1	2	3	4	5	6	7
23	A faculty member works with students to plan the academic path that will best prepare them for their postsecondary options.	1	2	3	4	5	6	7
24	Counselors post/provide a list of key activities, fees, and other important postsecondary application information.	1	2	3	4	5	6	7
	Family Involvement	Rarely			Some times			Usually
25	Families are provided opportunities to learn about the postsecondary application process.	1	2	3	4	5	6	7
26	Families are provided opportunities to become aware that postsecondary education is attainable for everyone.	1	2	3	4	5	6	7

27	Families are encouraged to be actively involved in the high school completion and postsecondary application process	1	2	3	4	5	6	7
28	Families are aware of the resources available to support the postsecondary aspirations of students.	1	2	3	4	5	6	7
29	Families are aware of the college application process, financial aid process (including FAFSA) and the timeliness associated with postsecondary applications.	1	2	3	4	5	6	7
	Faculty Involvement	Rarely			Some times			Usually
30	Teachers integrate information about postsecondary education into regular classroom activities.	1	2	3	4	5	6	7
31	Teachers are up to date on important "postsecondary knowledge"	1	2	3	4	5	6	7
32	Ongoing professional development allows teachers to be more active in preparing students for life.	1	2	3	4	5	6	7
	Postsecondary Partnerships	Rarely			Some times			Usually
33	Postsecondary institutions come to your school and provide information about their school.	1	2	3	4	5	6	7
34	Students are provided the opportunity to attend college and career fairs.	1	2	3	4	5	6	7
35	Students are provided the opportunity to go on a college visit.	1	2	3	4	5	6	7
36	Students have the opportunity to take dual enrollment classes.	1	2	3	4	5	6	7
	Articulation	Rarely			Some times			Usually
37	Faculty is knowledgeable about the coursework/credits required for postsecondary participation.	1	2	3	4	5	6	7
38	Faculty is engaged in ensuring students have completed coursework/credits needed for postsecondary participation.	1	2	3	4	5	6	7
39	Postsecondary expectations are consistent throughout all classrooms and grade levels.	1	2	3	4	5	6	7
40	Formal, planned activities (vertical teaming, curriculum mapping, etc.) occur between grade levels to ensure a smooth transition at each grade level.	1	2	3	4	5	6	7

Appendix C: Panel of Experts

The panel of experts who reviewed the *Principles of a College-going Culture Survey* included the following professionals:

John Happs, M.A.
Education Consultant
Denver, Colorado

Judy Madden, Ed.D.
BUILD DC
Washington, DC

Jon Charles, MBA
College Summit
Charleston, WV

Melissa Henley
Kanawha County Schools
Charleston, WV

Appendix D: Administrator Electronic Mail (E-mail)

Dear **[PRINCIPAL]**,

Attached is a letter requesting permission to distribute a survey to the teachers in your building. Teacher feedback is important to a study I am completing for my dissertation at Marshall University.

Please reply to this email by **[DATE]** to let me know if you grant permission for me to distribute the survey to your teachers. A simple reply of "yes" is all I need to allow me to distribute surveys to your teachers; a reply of "No" indicates that you do not grant permission to do so.

Please contact me if you have any questions about the study**.** Thank you for your support and I look forward to sharing results of this study with you.

I will look forward to your reply.

Keri L. Ferro

Appendix E: Administrator Permission Letter

To: Selected High School Administrators

Subject: Request to survey teachers

Dear **[PRINCIPAL]**,

This is a request for permission to distribute a survey to the professional staff in your building. Teachers and counselors are being asked to participate in an anonymous research survey entitled ***"Principles of a College Going Culture."*** This survey is being conducted as a part of my doctoral program requirements at Marshall University. The survey is comprised of a 2-page paper questionnaire which will take approximately ten minutes to complete. Participation is completely voluntary and replies will be anonymous; individual teachers will not be identified. The teacher may choose to withdraw or not participate. Blank surveys may either be returned or discarded. If teachers choose to not answer any question, they may simply leave it blank.

Each teacher will receive the survey, cover letter, and plain white envelope. They will be asked to return surveys in the sealed envelopes to a designated location in the school office. A drop box will be provided for collection of the surveys. **Teachers will be asked to return completed survey questionnaires within two weeks following receipt of the instrument and cover letter.** The principal investigator, co-investigator, or a College Summit regional representative will then pick up completed questionnaires.

Please sign and return the enclosed permission form to indicate your approval for the survey to be distributed in your school. If you do not wish the survey to be distributed to your teachers, please return the form unsigned. Your acknowledgement will remain in my file for the duration of the study. Your permission for distribution and your assistance in collecting the surveys will be appreciated.

Thank you for your assistance with this survey. If you have questions about the survey, you may contact me by phone at 304-767-5575 by e-mail at welcome3@marshall.edu. If you have questions concerning the rights of teachers participating in this research process, you may contact the Marshall University Office of Research Integrity at (304) 696-4303. Dr. Ron Childress, principal investigator for this study, may be reached at rchildress@marshall.edu, phone 304-746-1904.

Yours truly,

Keri Ferro

Appendix F: Survey Cover Letter

Dear Educator:

You are invited to participate in an anonymous research survey entitled ***"Principles of a College Going Culture."*** The study is being conducted by Dr. Ronald B. Childress and Keri Ferro from Marshall University and has been approved by the Marshall University Institutional Review Board (IRB). This research is being conducted as part of the dissertation for Keri Ferro.

The survey is comprised of a two-page (one-page back and front) paper questionnaire which will take approximately 10 minutes to complete. Your replies will be anonymous. Participation is completely voluntary. If you choose to withdraw or not participate there is no penalty or loss of benefits; you may either return or discard the blank survey. You may choose to not answer any question by simply leaving it blank. By completing this survey you are also confirming that you are 18 years of age or older.

Please return the completed survey to the survey collection box in your school office by the end of the third work week following receipt of this letter.

If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

I truly appreciate your taking the time to complete this survey. Please contact me at welcome3@marshall.edu if you have questions or need additional information.

Thank you,

Keri Ferro

Appendix G: IRB Approval Letter

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Office of Research Integrity
Institutional Review Board

401 11th St., Suite 1300
Huntington, WV 25701

FWA 00002704

IRB1 #00002205
IRB2 #00003206January 23, 2014

Ronald Childress, Ed.D.
Graduate School of Education and Professional Development

RE: IRBNet ID# 560691-1
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Childress:

Protocol Title: [560691-1] Levels of a College-going Culture in Selected West Virginia High Schools as Perceived by Teachers and Counselors

Expiration	January 23,	
Site Location:	MUGC	
Submission	New Project	APP
Review Type:	Exempt Review	

In accordance with 45CFR46.101(b)(2), the above study and informed consent were granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee for the period of 12 months. The approval will expire January 23, 2015. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

This study is for student Keri Ferro.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/ Behavioral) Coordinator Bruce Day, ThD, CIP at 304-696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Generatd on IRBNet

KERI L. FERRO
welcome3@marshall.edu

EDUCATION

Marshall University
- Doctor of Education in Curriculum and Instruction, 2015
- Education Specialist in Curriculum and Instruction, 2014
- Master of Education in Educational Leadership, 2005

West Virginia State University
- Bachelor of Art in Secondary Education, 2002

CERTIFICATION

State of West Virginia, Chemistry, 9-12, Professional
State of West Virginia, Administrative Certificate, PK – AD, Professional

PROFESSIONAL EXPERIENCE

2007 – Present	Program Director, College Summit West Virginia
2003 – 2007	Chemistry Education Teacher, Kanawha County Schools, St. Albans High School, St. Albans, WV
2002 – 2003	Chemistry Education Teacher, Kanawha County Schools, Riverside High School, Belle, WV

PRESENTATIONS

2015	*App-a-thon* West Virginia Department of Education Regional School Counselors Conference, Charleston, WV.
2014	Panelist for Youth Panel at Women's Day at the Legislature, Charleston, WV
2012	*Sharing Your Story: Conveying an Experience* Co-presenter with Ayanna Franklin at Student Success Summit, Morgantown, WV.
2009	*Urban and Rural Poverty among Public School Students* Co-presenter with Jon Charles College Summit Institute, Las Vegas, NV
2008	In-depth look at 21st century initiative in West Virginia" Co-presenter with Dr. James Phares at West Virginia School Administrators Conference, WV