

ABSTRACT

Title of Dissertation: ALTERNATIVE EDUCATION AND
STUDENT COLLEGE AND CAREER
READINESS: AN EXAMINATION OF ONE
URBAN SCHOOL SYSTEM

Mark E. Fossett, Doctor of Education, 2018

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A quantitative causal-comparative study was conducted in one large urban school system, in the Mid-Atlantic region of the United States to examine the efficacy of alternative high schools for students at high-risk of academic failure as compared to students at high-risk of academic failure in comprehensive high schools. The investigation revealed that there is a significant difference in the academic and sociocultural variables related to college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools.

The research was conducted in one large urban school system, and will be referred to as DeKota County Public School System(DKCPS). DKCPS opened their alternative school program in 2003. Through a casual-comparative longitudinal analysis of one graduation cohort's four-year journey through high school, we will examine the differences in academic and sociocultural variables related to college readiness and successful learning outcomes. Several variables emerged as being relevant and four of those variables emerged as being significant. They were four different types of quantitative analysis done to validate the variables and the strength of their inclusion in the analysis and outcomes. The data collected provided an opportunity to make recommendations to DKCPS on the benefits that alternative schools have on high-risk alternative school students in their system. Additional research was also recommended to expand this research to multiple school districts to further identify the significant variables that are explanatory of college readiness and successful learning outcomes for high-risk students enrolled in alternative high schools versus high-risk students in comprehensive high schools.

ALTERNATIVE EDUCATION AND STUDENT COLLEGE AND CAREER
READINESS: AN EXAMINATION OF ONE URBAN SCHOOL SYSTEM

By

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Dedication

This dissertation is dedicated to my family; for without all of their love, support, and prayers this accomplishment would not have been achieved. To my Father, Dr. Nathan J. Fossett, affectionately known as “Natedog” I love you and miss you dearly, but I want you to know, we did it! You showed me from day one what it means to provide for your family and to ensure you take care of them by whatever means necessary. To my mother, Denise A. Jones, thank you for raising me to be the man I am today. Your sacrifice, encouragement and your constant love didn’t go unnoticed! To my Aunt Myra, I will never forget all that you did in ensuring that I continued my education. Without your love and timely financial support my educational journey might have ended a long time ago. To my beautiful wife Dr. Kristil Fossett, your sacrifice, support, and your determination inspire me to achieve. Without you this would not be possible. All my Love, All my Life! To my 3 beautiful daughters, I am because of you! This dissertation is dedicated to you, Kristian, Kennedy, and Kerrington, you are my world, everything your mother and I do is for you. We hope that our achievements are shining examples and extrinsic motivation for you to never stop yearning for knowledge. Knowledge truly is the difference maker in life.

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ALTERNATIVE ED & STUDENT COLLEGE AND CAREER READINESS

Section I

Introduction to the Problem and Literature Review

Introduction to the Problem

The pathway to sustained productivity as an American citizen begins with the attainment of the high school diploma, which opens the door for meaningful employment. Research tells us that students who complete high school are more likely to remain gainfully employed as contributing members of society than students without a high school diploma (United States Department of Labor, 2016). What is known for certain about the fate of America's youth is that a high school diploma is essential. More than 60% of opportunities in the workforce require at least a diploma (American Academy, 2012). What's more, statistics have proven over the past decade that nearly 75% of students who graduate on time with a high school diploma will experience a higher standard of living than their peers who do not (Promising Practice Brief, 2016).

Over the past 70 years, America has experienced a drastic decline in the post-secondary aspirations of high school students, especially among low income and minority students (Roderick, M., Nagaoka, J., Coca, V. , Moeller E., Roddie, K., Gilliam, J. and Patton, D., 2008). A primary factor contributing to this decline is an inadequate academic preparation. Getting all students college-ready is a goal that has never been

met nationally, and the current standards for high school readiness are not sufficient to put students on the path to college (Allensworth, E., Correa, M. Ponisciak, S., 2008).

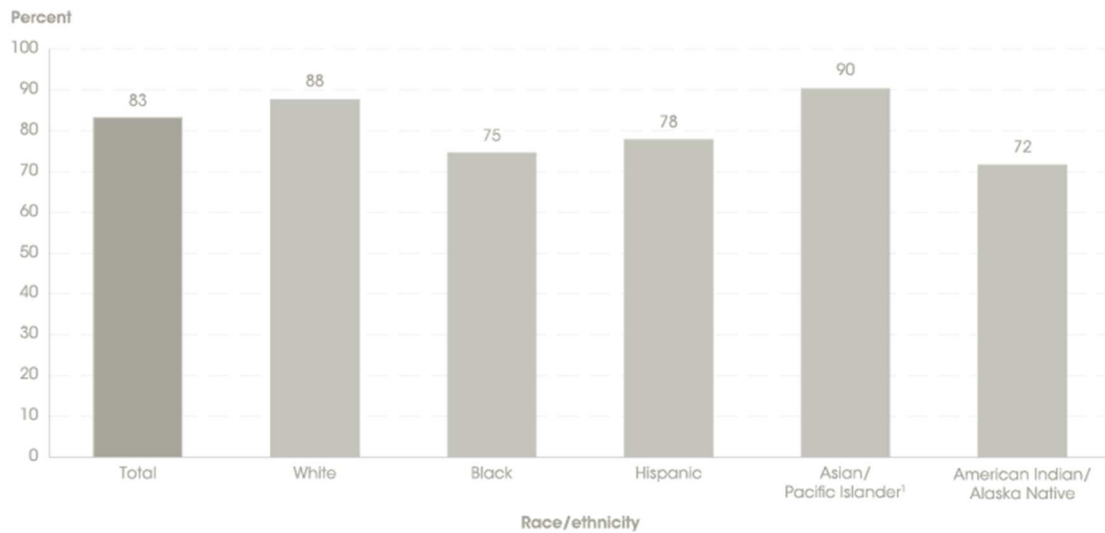


Figure 1: National Graduation Rates by Race, Circa 2016

According to research by the Georgetown University Center on Education and Workforce, the portion of jobs in the United States of America that required some sort of post-secondary training nearly doubled from 1973 to 2008, going from 28% to 59%, and is projected to increase to 63% in the next decade. The number of high school graduates in the middle class, as defined in the Georgetown study as those who earn between \$30,000 and \$79,000 for a family of four, is especially dwindling. In 1970, 60% of high school graduates were in the middle class, while in 2007, only 46% were in this group (Konen, 2012). Further, Konen states that in 2009 the median weekly earnings of a high

school dropout was \$451, while earnings for individuals with a high school diploma was \$638. Graduates holding a bachelor's degree earned a median weekly salary of \$1,053 (Konen, 2012). This data suggest that a student who graduates from college will earn 61% more income on a weekly basis than a student who just attains a high school diploma. Konen also stated that, as of 2011, the unemployment rate among full-time workers age 25 or older for college graduates was 4.9% as opposed to 9.4% for high school graduates (Konen, 2012). This represents almost a 45% higher unemployment rate for persons with a high school diploma.

Historically, both students and educators envisioned the high school diploma as a major fete and final accomplishment toward joining the workforce. According to Konen, in today's technologically and economically driven society, the high school diploma does not fully prepare graduates for college or entrance into the labor market where advanced skills are vital to maintaining a competitive edge (Konen, 2012). In a 2010 address to the College Board, then U.S. Secretary of Education Arne Duncan, laid out a vision for education that speaks to the expectations of America's youth beyond the hallowed halls of high school. More specifically, Secretary Duncan stated, "The mission of high schools can no longer be to simply get students to graduate." (Roderick, 2013, p. 1).

College and Career Readiness in Maryland and DKCPS

In 2016, the Maryland State Department of Education (MSDE) defined a graduating student's college and/or career readiness by his/her ability to meet designated markers including but not limited to the following (See Figure 1):

- Partnership for Assessment of Readiness for College and Careers Passage:
Mathematics - Score of four or five on Geometry or Algebra II PARCC exams during eleventh grade year. English Language Arts - Score of four or five on English 10 or English 11 PARCC exams.
- SAT: Mathematics - Score of 500 or greater on the mathematics section. English Language Arts - Score of 500 or greater on the Evidence-based Reading and Writing (EBRW) section.
- ACT: English - Score of 21 or greater average on the English and Reading Test. Mathematics - Score of 21 or greater on the Mathematics Test.
- Advance Placement: English - Score three, four, or five on the English Language and Composition or English Literature and Composition exam. Mathematics - Score three, four, or five on the Calculus AB, Calculus BC, Statistics, or Computer Science exam.

	11 th Grade Assessment								Senior Coursework	Re-Assessment
	PARCC	SAT	ACT	AP	IB	ACCUPLACER	DUAL ENROLLMENT	If a student is not college and/or career determined at the end of 11 th grade, he/she will:		
English Language Arts (ELA)	English 11 score of Level 4 or 5 English 10 score of Level 4 or 5 satisfies the CCR determination (pending further research).	Score of 500 or greater Evidence-based Reading & Writing (EBRW) Section	Score of 21 or greater Average of English Test & Reading Test scores	English Language & Composition or English Literature & Composition Exam Score of 3, 4, or 5	Lang. A: Lit. SL or HL or Lang. A: Lang. & Lit. SL or HL Grade 4 or above on one or more	Reading 79+ and Writing 6+ and Sentence Skills 90+	Admission to and enrollment in a Maryland IHE's appropriate ELA college credit bearing course. Existing local agreements between LEAs and community colleges on CCR are accepted.	Complete an ELA transition course or an additional ELA "instructional opportunity" (online, hybrid, module, etc.) in preparation for re-assessment OR Enroll in a transition course articulated with a community college. These articulated college courses include, but are not limited to, Developmental English, courses approved by the community college as sufficient preparation for college, or courses that are taught by community college faculty.	Summative Course Assessment (externally validated by local community college) OR PARCC 11 OR SAT/ACT OR Accuplacer OR AP Test OR IB Test	
MATH*	Algebra II Score of Level 4 or 5 For 11 th graders enrolled in Geometry, a score of Level 4 or 5 on PARCC Geometry satisfies the CCR determination (pending further research). Please see **below.	Score of 500 or greater Mathematics Section	Score of 21 or greater on Mathematics Test	Calculus AB Calculus BC Statistics Computer Science Exam Score of 3, 4, or 5	Math Studies Math SL Math HL Further Math Grade 4 or above on one or more	Elementary Algebra test score of 110+ or College Algebra test score of 45+	Admission to and enrollment in a Maryland IHE's appropriate math college credit bearing course. Existing local agreements between LEAs and community colleges on CCR are accepted.	Complete a math transition course or an additional math "instructional opportunity" (online, hybrid, module, etc.) in preparation for re-assessment OR Enroll in a transition course articulated with a community college	Summative Course Assessment (externally validated by local community college) OR PARCC Algebra II OR SAT/ACT OR Accuplacer OR AP Test OR IB Test	
Meet CCR Standard	*If a student is determined "college ready" in mathematics prior to 11 th grade, all CCR requirements have been met for mathematics. However, students entering the 9th grade class of 2014–2015 school year shall enroll in a mathematics course in each year of high school that the student attends, up to a maximum of 4 years of attendance, unless in the 5th or 6th year a mathematics course is needed to meet a graduation requirement. **For 11 th graders enrolled in Geometry who take PARCC Geometry, a score of 4 or 5 does not indicate placement in a college credit bearing course, and may also be used to meet the SB740 assessment requirement. These 11 th grade students who score a 4 or 5 on PARCC Geometry and enroll in Algebra II as their transition experience are not required to reassess in their senior year.									
Career/Tech Programs (CTE)								An appropriate transition course or other instructional opportunity consistent with the completion of a State Approved Career and Technology Education Program of Study (see link and attached list)	Technical Skill Assessment recognized by MSDE leading to a license or an industry certification	

Figure 2. Maryland State Department of Education Graduation Requirements

Despite these standards for accomplishment, a standardized curriculum across the state, and teacher and leader certification requirements, the state of Maryland ranks in the top percentage of the 100 largest school districts with the highest number of dropouts in the comprehensive high school (NCES, 2000).

Table 1

*Percentage of High School Dropouts in MD Schools with Large School Populations
2008-09*

District	Total	Diplomas	Grades 9 -12 Drop outs
Montgomery County	10,316	10,175	3.1
Baltimore County	7,571	7,526	4.9
Prince George's	8,644	8,617	2.7
Baltimore City	4,116	4,019	9.2

Source: NCES, 2009

In 2015, DeKota County Public Schools (DKCPS) measured college and career readiness by the percentage of student enrollment in Advance Placement (AP), International Baccalaureate (IB) or certificate programs. According to the DKCPS Strategic Plan (2010), the successful DKCPS graduate should leave high school with one of the following: (1) meeting the requirements for a two through four-year college; (2) meeting the requirements for acceptance to a technical school; (3) meeting the requirements for acceptance to the armed forces; and/or (4) earning a technical license for certification.

Seniors who are graduating from one of the DKCPS alternative education schools with a high school diploma have not been determined to be college or career ready, nor has there been a determination if they are being provided with the fundamental skills necessary to be college or career ready (Maryland State Department of Education, 2016). More specifically, the programs that are available to students in the comprehensive high schools that are used to qualify them by state standards to be college and career ready (Figure 1) are not being offered at alternative high schools. There are currently no AP or IB programs offered in DKCPS alternative high schools. Additionally, there are only three certificated programs: Carpentry, Electrical, and IT that are offered in DKCPS Alternative High Schools.

DKCPS data trends indicate that for the years 2013 through 2016, half of high school seniors indicated in their annual graduate survey that they intended to attend a four-year college. Additionally, data indicates that in 2015, 4,432 out of 8,009 DKCPS graduates entered into a two or four-year college within the first year immediately following graduation. This equates to 55.3% of all DKCPS graduates going on to post-secondary education within a year of graduation. The disaggregated graduation data for the alternative high schools is quite contrary. In 2014, 20 out of 165 graduates entered into a two or four-year college within the first year immediately following graduation. This indicates that only 12.1% of DKCPS alternative high school graduates went on to post-secondary education within a year of graduation.

The Problem

Are students in DKCPS alternative high schools being prepared to be college and career ready at the same level of their high-risk peers in comprehensive high schools? To ensure the success of students for college and the workforce, many states have adopted uniform graduation requirements to level the playing field for college preparedness (National Governors Association, 2010). In general, alternative school programs service students not optimally served by traditional schools, and they deviate from regular school organization, programming, and culture” (Skiba, 2003). According to the Elementary and Middle Schools Technical Assistance Center (EMSTAC), alternative educational programs vary. They can vary from traditional public high schools in many aspects, such as teacher-to-student ratio, program setting, behavior modification emphasis, linkage of school to community or workplace, curriculum design, emphasis on counseling for conflict resolution and anger management, and the availability of support services (EMSTAC, 2012). Alternative education programs serve grades seven through twelve. The typical alternative education school day is a six-hour day where essential supports are provided in order to reintroduce the student to a regular education setting. Structures such as one-on-one mentoring, counseling, and coaching are put in place to assist students in developing the necessary skill sets to become successful when they transition back to their regular schools (Hickey, 2016, p. 104). When these structures are not present in the alternative setting, the program tends to hold little value and becomes a punitive setting or a dumping ground for “certain students” (EMSTAC, 2012).

Alternative education schools in their origin were “generally designed to create a more positive learning environment” through variables such as low teacher to pupil ratios, self-paced instruction that is individualized, performance based assessment, and

less-structured classroom settings (Cox, S. et al 1995). They are typically defined as educational programs that fall outside the traditional K–12 curriculum and frequently serve students who are at-risk of school failure (Prowoski, 2014). Historically, alternative schools were created to address discipline problems for students who are at-risk of dropping out (Raywid, 1989). In their original design, they were created as a means to provide alternatives for children who were at-risk for academic failure or school dropout (Raywid, 1990).

Up until 2014, MSDE did not have a clear definition for alternative education programs as required by Maryland Senate Bill 362 (Appendix A). To address this lack of definition for alternative education, they commissioned the Regional Educational Laboratory Mid-Atlantic to review information on alternative education programs from state websites, federal websites, and from local Maryland school system websites.

Following are the key findings found in their review:

1. All states and the District of Columbia do have formal definitions of alternative education in their jurisdictions;
2. Literature indicates that a state’s definition of alternative education should include target population, school setting, services provided, and program structure;
3. Alternative education programs primarily serve students with behavioral problems; and
4. Most alternative education services include the regular academic instruction provided at comprehensive schools, counseling, life skills, job readiness development, and behavioral support.

Essential characteristics of alternative education programs. The features of an alternative behavior educational program are at the core of whether it is effective or not (Cable, K. et al, 2009, p. 3). The U.S. Department of Education describes an alternative school as “a public elementary/secondary school that: 1) addresses needs of students that typically cannot be met in a regular school; 2) provides nontraditional education; 3) serves as an adjunct to a regular school; or 4) falls outside the categories of regular, special education, or vocational education (USDE, 2007).

Among these key features include small class sizes, highly trained teachers, and clear expectations for behavior and academic performance (McDonald, 2002). The EMSTAC (2012) has identified the following characteristics of effective, research-based alternative education programs:

- *Low ratio of students to teachers.* This allows for high quality instruction, more personal time for each student, and a greater chance of student behavioral gains.
- *Highly structured classroom.* Within this structure, self-management skills are taught, and high rates of positive reinforcement are used. This will lead to more time engaged in academic tasks and will teach students the self-monitoring skills they will need to succeed in less restrictive settings.
- *Positive rather than punitive emphasis in behavior management.* A positive emphasis rewards acceptable behavior and compliance, and directly reinforces classroom rules that have been taught.
- *Adult mentors.* An adult mentor takes a special interest in a student, tracks the student's behavior, attendance, attitude and grades, and uses positive reinforcement

with the student that can make a significant difference in both the academic and the personal life of a student with behavioral problems.

- *Individualized behavioral interventions based on a Functional Behavioral Assessment (FBA).* A complete functional behavioral assessment identifies causes of the behavior, factors maintaining the behavior, and positive behaviors to replace the problematic ones.

Conducting an FBA may be a crucial first step in the process of implementing positive, effective behavioral change.

- *Social skills instruction.* This instruction can include problem solving, conflict resolution, anger management, and empathy training.

- *High-quality academic instruction.* Instruction that is direct and includes learning strategies, small interactive groups, and directed responses and questioning of students keeps them engaged and focused on the material at hand. Difficulty of instruction must also be controlled.

- *Involving parents.* Involving parents entails frequent communication between the home and the school; parent education programs are provided either at school or in the community, along with other activities designed to enfranchise parents.

- *Reintegration Plan.* Designing interventions to ensure that a student can effectively transition back to his/her "regular" classroom is critical. Prior to reintegration, expectations, rules, and procedures common in the student's regular classroom should be implemented in the alternative environment. Behavioral interventions and external reinforcement should be reduced over time to normal classroom levels so that the student

gradually comes to perceive it as the norm. Receiving teachers should be involved in planning the transition (EMSTAC, 2012, p.1).

Three basic types of alternative schools exist. According to McDonald, there are three basic types of alternative school programs:

- Type 1: Institutions of choice that any student may attend until high school graduation. These schools are innovative and have both non-traditional organizational and administrative structures.
- Type 2: Placement institutions enrolling disruptive students for a temporary period. These schools provide an alternative to expulsion and focus on behavior modification to reduce or eliminate problems that caused discipline concerns in traditional schools.
- Type 3: Referral institutions enrolling students with academic, social, or emotional difficulties. These schools focus on rehabilitating students so that they can succeed in traditional school (McDonald, 2002).

Although most educational examiners realize that accountability is necessary in alternative education, it is evident that most states struggle to identify what is the appropriate method of accessing a successful alternative program. The question is whether the program should focus primarily on traditional College and Career ready standards as dictated by normal federal or state guidelines, or should the standards be more in line with developing the at-risk student into a productive member of society knowing that traditional means of education have not been successful. “Alternative education accountability measures should include interim measures and measures that

track continuous ‘added value’ or recognize that some youth may cycle in and out of a program before experiencing steady progress” (Aron, 2006, p.18). The consensus is that first and foremost alternative educational programs are just that, educational programs. Therefore, preparing alternative students academically must be the singular most important focus; however, educators must also realize that in order to effectively educate students in these types of programs, they must also address those “other” issues that are a barrier to maximizing outcomes for students. A holistic accountability framework of their success must include educational as well as other outcomes. A 2003 effort to document the multiple domains of positive youth development (Hair et al, 2003) identified the following points as key to educational attainment and cognitive development:

- Educational Attainment
- Grade Repetition
- Achievement Motivation
- Academic Self-Concept
- School Engagement
- Good Study Skills
- Basic Skills: Reading, Writing, and Mathematics
- Higher-Order Thinking Skills • Oral and Interpersonal Communication Skills
- Language Skills • Arts Participation Skills and Knowledge
- Computer Technology Skills
- Research Related Skills

As one can clearly see, most of these key areas are not germane to just alternative education settings. They are also measures that surely work for regular comprehensive settings; however, it is widely agreed that the frequency of measurement and the addition of supplemental measurements should be applied to alternative educational environments.

According to research done by Womack and Hattie, there are proven instructional practices that are high leverage teaching strategies that directly impact student achievement: self-report grades, Piagetian programs, providing formative evaluation, micro teaching, acceleration, classroom behavior, comprehensive interventions for learning disabled students, teacher clarity, reciprocal teaching, feedback, lesson planning, teacher reflection, higher-order thinking, fairness, safe-school environment, professionalism, responsibility, and self-efficacy training (Womack et al, 2011 and Hattie, 2009).

It is clear that there are a multitude of resources, systems, and structures that contribute to the definition of alternative schools in the United States of America. Part of the challenge in definitively identifying those characteristics that contribute to a successful and sustainable model involves figuring out “how to introduce high academic standards in alternative education systems without sacrificing the elements that make alternative programs successful, and without compromising the integrity of the high standards” (NGA Center for Best Practices 2001, p.1).

The alternative school debate. Even amidst the common understanding regarding what makes for an effective alternative school, there are two counter posing mindsets that frame the debate over alternative school programs: the “get tough” group versus the “student support” group (Skiba, 2003). One side advocates for the removal of disruptive students from the school community, while their opposition contends that supports should be provided. The “get tough” regime states that the removal of disruptive students is necessary to ensure that the learning environment is not compromised. They contend that removing distracting students will prevent

copycat misbehavior. However, “student support” proponents, backed by research, state that the strongest predictor of academic excellence is the opportunity to learn (Skiba, 2003).

It seems as though the debate over alternative schools hinges upon the purpose of the specific alternative program being examined. “The lack of a commonly accepted definition of ‘alternative education’ indicates the fluidity of related policies and legislation, the diversity of contexts and settings, and the various groups of at-risk youth who may benefit from alternative education options” (Aron, 2003). To clarify, the designation of an alternative school can have a variety of meanings and purposes. For instance, vocational schools are considered alternative schools, but have a profoundly different purpose for existence than an alternative school created for students with behavioral issues.

With this in mind, alternative schools generally receive less guidance, are subject to less rigorous oversight, and have access to fewer resources than mainstream school programs. They provide educational opportunities for students suspended or expelled from regular schools, and in some instances, for students who request alternative placement (Moore, 2005).

Alternative Education in DeKota County Public Schools.

DKCPS has embraced the notion of alternative education as a pathway for success since 2003 when it opened its first alternative education program. At that time in history, the combined programs enrolled 460 students who were placed in the school due to one or more of the following conduct issues: (a) School/Parent Referred - Behavioral Issues,

(b) Court Referred – In the Juvenile Justice System, (c) Expelled - Violation of the Students Rights and Responsibilities Handbook.

Table 2

Total Enrollment in DKCPS Alternative Schools

DKCPS High School	Year									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
School A	121	117	75	81	81	94	79	103	99	92
School B	80	103	106	101	94	79	101	101	103	96
School C	117	154	114	90	76	111	103	125	131	114
School D	176	166	164	147	194	113	99	95	95	75
Totals	494	540	459	419	352	397	382	424	428	377

In 2018, there are four alternative high schools serving 414 DKCPS students with behavior and discipline issues. Two of these programs serve ninth and tenth grade students, and the other two serve eleventh and twelfth grade students. Each alternative high school has space for up to 120 students who have been referred by their base schools for behavioral issues that severely violate the code of student conduct such as fighting, possession of drugs, and possession of weapons.

In 2012, only 24.3% of students who attended alternative schools passed all three Maryland High School Assessment (HSA) exams that were required for graduation as compared to 57% of students who attended the comprehensive high schools and passed all three exams.

This data show that there is a variance in performance between students who attend alternative schools and students who attend comprehensive schools in DKCPS.

Alternative Education: A Problem of Practice

The data show that there is a wide achievement gap between students who attend alternative schools and students who attend comprehensive schools in DKCPS. Students who attend DKCPS alternative schools do not have the opportunity to take Advanced Placement or International Baccalaureate courses because they are not offered. Also, there are fewer academy choices for these students at alternative schools as compared to students in the regular comprehensive environment. Since each alternative school is only a two-year program, most students don't have the luxury of attending an alternative school for more than one year or two years consecutively. This lack of continuity does not allow for students to optimize the benefits of the smaller learning environment. Since alternative school course offerings are very limited, most students are forced to take a liberal arts track to graduation once enrolled in an alternative school. For example, if the student was on a Hospitality and Tourism (H&T) track before entering the alternative school, he/she cannot continue on that track because the H&T academy is not offered at any of the alternative schools. Another issue is that alternative schools do not offer honors courses or any other high level academic courses. This means courses that traditionally offer the highest level of academic rigor for comprehensive school students are not available for the alternative student.

History of Alternative Education in America

Early alternative programs focused on offering alternative learning opportunities to students who did not function well in the mainstream environment (Gregg, 1999). These programs functioned under the philosophy that “alternative education is a perspective, not a procedure or program. It is based on the belief that there are many ways to become educated, as well as many types of environments and structures within which this may occur” (Morely, 1991). Alternative programs were soon recognized as appropriate placements for disruptive students (Farris-Berg, K. and Schroeder, J., 2003, pp. 13 and 14).

While these two purposes to create alternative learning environments and to remove disruptive students from the traditional learning environment may at first glance seem complementary, further examination reveals a serious conflict (McDonald, 2002). The Southwest Educational Development Laboratory speculates that students who are required to attend such programs “include a less motivated, and perhaps more at-risk population” and thus mandatory alternative placement “may jeopardize the culture of the alternative education program” (McDonald, 2002), (Morely, 1991).

Defining Alternative Education

Alternative schools and programs have seen an emergence as states and local education agencies seek to create a solution for educating at-risk youth and decreasing the dropout rate. A 47% increase in the number of alternative schools was observed between 1992 and 1998 (Kleiner, Porch, & Farris, 2002). In reviewing the literature about alternative schools, many states and researchers have attempted to define what is actually an alternative school. When the definition of alternative education for at-risk youth is expanded to include public alternative schools, charter schools for at-risk

students, programs with juvenile detention centers, community-based schools or programs operated by districts, and alternative schools with evening and weekend formats, the number of programs increases dramatically (Foley & Pang, 2006). Much of the literature begins with defining alternative schools as it relates to their study. Again, since there is no continuity in alternative education schools and programs, there is no continuity in the research. Alternative education is as diverse as the number of alternative schools or programs that exist in each state and/or local jurisdiction. Some studies are very broad with their definitions and include all non-traditional educational settings. Other studies, however, are very specific in describing what type of alternative settings they are referring to or what type of alternative settings they are excluding in their research.

In 2012, Schlessman and Hurtado provided insight on alternative education across the United States through their work, “A Comparison of State Alternative Education Accountability Policies and Frameworks.” This research sought to examine, “State accountability systems for alternative education and to determine what key elements lead to quality alternative education.” (Schlessman and Hurtado, 2012) This research study sought to identify the accountability systems that were in place to ensure that alternative students were being successful and producing graduates that typically were being separated from the educational system and were being defined as non-graduates (Figure 3). Their findings were that 22 states and the District of Columbia were examined and identified as having alternative policies for alternative education.

What they found was that of those 22, nine held alternative schools to the same standards of the other schools, while the rest have not yet begun to hold alternative

schools to any sort of accountability policies. “The general problem is that current state policy for alternative school accountability is inconsistent across states” (Schlessman and Hurtado, 2012). In their research they used a quantitative and qualitative method to analyze alternative education accountability policy and frameworks.

In the study, *Alternative Schools: Research of Policy, Practice and Implications for Youth*, University of Minnesota, Project, A.S., (2003), researchers contend, “Alternative schools have emerged over the year as one educational option for students who are not successful in traditional school settings. The number of these schools is growing rapidly, yet we know very little about similarities in policy and practice across states.” (Project, 2003) The major question asked through this study was, “Does your state have legislation related to alternative programs/schools?” (Project, 2003) Through a list and review of current state legislation and policy from 48 states that had some type of legislation addressing alternative schools or programs, it examined and discussed information with regard to enrollment criteria, alternative school definition, funding, curriculum, staffing, and students with disabilities. Two sources were used to obtain information about current legislation in each of the 50 states and the District of Columbia. First, a web-based search was conducted of all state departments of education web sites. Second, results from a survey conducted by the University of Minnesota’s Alternative Schools Research Project were compiled and used to supplement existing

State "At/High Risk" Characteristic	Colorado	Oklahoma	North Carolina	Texas
Psychiatric disorder or behavior	*	*	*	*
Academic progress		*	*	*
Dropout	*	*		*
Drug or alcohol use	*	*	*	
Pregnant or parenting	*	*		*
Retention		*	*	*
Adjudication	*			*
Child abuse or neglect	*		*	
Expulsion	*			*
Homeless	*			*
Limited English proficiency			*	*
Truancy		*	*	
Domestic violence	*			
Grades		*		
Gang involvement	*			
Migrant	*			
Over-aged & under-credited	*			
Parent/guardian in prison, on parole or probation	*			
Socio-economic status		*		
Suspension	*			

Figure 3. State Definitions of At High

information gathered from the web-based search. The survey used had a 78% response rate, which equaled 39 participating informants. The results in this study indicate an increase in attention paid to alternative education at the state level between 1998-2003. Further, the results of this study indicate that most states formal laws or policies define

alternative schools as being for at-risk students who are served in settings separate from the general education classroom.

This is similar to the definition provided by the U.S. Dept. of Education and suggests that there is some consensus on the definition in this area. The laws and policies reviewed, however, suggest that “non-traditional settings” can range from a separately funded program with a separate facility to a classroom set aside for disruptive students. Variation in definition allows for flexibility in design. These programs must be evaluated to determine specific characteristics that are conducive to student success.

Review of state laws and policies raise some questions about the intent of the legislation and the extent to which alternative school practice is meeting the desired outcomes of state laws and policies. Further investigation is also required to determine to what extent policy matches practice.

Review of the Literature

The NCES study of Public Alternative Schools and Programs for Students At-Risk of Education Failure: 2000-01, reported that there were 10,900 public alternative schools and programs, serving 612,000 students across the United States (NCES, 2001). Of the limited research about alternative education and its impact on student success data trends indicate that alternative education programs have a positive impact on student achievement. Some of the contributing factors to this success include fidelity of program implementation, high expectation and accountability for student behavior, and consistent human capital support structures that were in place.

In a 1995 meta-analysis study led by researcher Stephen Cox, researchers sought to examine what impact alternative education has, if any, on student performance. At this phase in the implementation of alternative educations, research about its success was met with mixed reviews (Cox, S. 1995, pp. 220 and 221). Employing a meta-analysis process, researchers examined 57 previously existing studies to examine relationships between characteristics of the programs and program impact. Through examination of the findings across the studies, researchers found that alternative education programs did have a slight impact on student performance, attitude and self esteem, regardless of the research design of the 57 studies that they cross-compared. Their work showed that attitude toward school amongst the varied studies had the highest degree of similarity. Additionally, their survey of the research showed that alternative education had no impact on a change in student delinquent behavior.

More recently, in a study conducted in 2010, Soribel Genao compared the effectiveness of alternative education schools. Using a mixed methods approach via observations, surveys, interviews, and student performance data, the researcher sought to determine whether participating in an alternative high school initiative program makes a quantifiable difference. The researcher surveyed 61 administrators, teachers, and staff about their views and experiences in the alternative education and non-alternative education programs in their schools. A component of the research also included an examination of student performance data for 2,219 students in which the research compares student performance among students participating in an alternative education and non-alternative education programs (Genao, 2010). The researcher found that overall performance of students in the alternative education program was significantly higher

than the comparison group. This increase in achievement was also noted across course grades and grade point averages between both comparison groups (Genao, 2010).

In a comparison study that was conducted in 2009 of two alternative education programs, researchers sought to examine support available in alternative education schools. By using archival data, observations, a survey, and interviews, they examined the two alternative schools. After compiling their findings, they used the data to examine instruction, organization, governance, accountability, and how well the programs provided a community of support. Through examining the factors and the data against the Advocacy Design Center (ADC) framework, the study showed the characteristics of the two alternative schools, the extent to which the two schools provided a community of support for the students, and the degree to which the alternative high schools were a true alternative to the traditional high school (Smith, 1990). According to the ADC framework, the system incorporates four elements:

1. a system of instruction;
2. a pattern of organization;
3. a system of governance; and
4. a system of judging or accounting for the school's accomplishments.

More specifically, the researcher looked at 72 students who were enrolled in two Alternative Schools in Long Island, New York. Both of the groups, School A (N = 29 students) and School B (N = 43 students), were students with varied genders and ethnicities. Additionally, teachers who worked at both schools spanned a number of disciplines and had varied expertise (Tables 3 and 4). Below is a breakdown of teacher credentialing amongst those who taught the alternative education classes:

Table 3

Teacher Certification Alternative School A

Teacher	Certification	Subject(s)
Teacher 1	Science	Living Environment/Biology, Astronomy 1, Astronomy 2, Contemporary Issues in Science
Teacher 2	English	English 11, English 12
Teacher 3	Mathematics	Algebra
Teacher 4	Mathematics	Math Course 12
Teacher 5	Social Studies	Economics, Government, Social Studies 11
Teacher 6	Physical Education	Physical Education

Table 4

Teacher Certification Alternative School B

Teacher	Certification	Subject(s)
Teacher 1	Science	Living Environment/Biology, Forensics, Environmental Science
Teacher 2	English	English 9, English 10, English 11, English 12
Teacher 3	Mathematics	Algebra, Math A, Math B
Teacher 4	Social Studies	Economics, Criminal Justice Social Studies 11, Global 9 & 10
Teacher 5	Physical Education	Physical Education
Teacher 6	Art	Art
Teacher 7	Language other than English	Spanish
Teacher 8	Physical Education	Health
Teacher 9	Special Education	Inclusion and Resource Room

Their research showed that expectations for student engagement was minimal, and for most of the classes that they observed, technology to engage students was rarely

used, little to no collaboration was expected amongst students, and typically, students worked solo. Rarely did teachers create opportunities for performance-based instruction to promote learning through presentations or demonstrations. In both environments, the expectation was that the learning would come directly from teacher delivery. In one of the schools, the observer noted that the principal indicated that teacher focus was primarily on the annual state test for high school students and covering the curriculum, and apparently not considering the students' personal circumstances and needs that landed them in the program.

In a study by Foley and Pang (2006), "Alternative Education Programs: Program and Student Characteristics", the researchers sought to examine the impact that characteristics of the administrative structures and physical facilities of alternative education programs had on alternative education and program success (Foley, 2006). The researchers clearly identified the research question that was to identify the characteristics of alternative education programs including the administration of the programs, school and community supports, educational faculty and staff, and administrators' experience and educational background. Using a mixed method research design, surveys were administered to 84 program directors or principals of alternative education programs. The participants were asked to describe: (a) administrative structure, (b) student population, (i.e. ethnicity, race, gender, etc.), (c) program characteristics, (d) program supports, (e) characteristics of instructional staff, and (f) characteristics of school leadership, pertaining to their individual alternative school or program. An initial implication from the survey results was that alternative schools lack

accessibility to appropriate resources to provide educational experiences similar to students in the traditional high school program. A sizable number of principals also reported limited or no access to educational supports, such as libraries, science labs, and computer labs, yet indicated they were providing the general education curriculum.

In the Schinke, Cole, and Poulin (2000) study, “Enhancing the Educational Achievement of At-Risk Youth”, the researchers examined a non-school alternative program aimed at enhancing the educational performance of economically disadvantaged early adolescents who live in public housing. Using a mixed method three-arm research design with a purposive sample, they examined whether 283 economically disadvantaged at-risk students were provided interventions. The researchers focused on variables such as the number of hours spent on non-educational enhancement program work with knowledgeable adults, creative writing, leisure reading, homework completion, students helping other youths with school homework, projects, and skill acquisition, and board games and other recreational pursuits that drew on cognitive skills and talents transferable to school lessons. Additional variables included participation in incentives such as field trips, school supplies, additional computer time and they were afforded special privileges by each local boys and girls club. Youth completed self-reports, together with teacher and school reports, point toward improvements. Subsequently, data collectors gathered youth self-reports and also interviewed teachers by telephone. Additionally, researchers gathered data on youths’ grades in mathematics, English grammar, composition, reading, spelling, history, science, social studies, geography, and overall averages. Results from this study support the value of educational programs in alternative settings for high-risk students.

Currently, there are few rigorous studies (using random assignment, control groups, etc.) that examine student outcomes and program effectiveness of alternative education. Clearly, more research is needed in this area, especially given that accountability and outcome measures used in schools may not be sufficient for alternative education (Aron, 2006, p.18). However, research overall suggests that alternative education programs do achieve success for its student populations.

Section 2

Methodology

This section presents the research methods used for the study, including a discussion of the research design, the sampling approach, and sample characteristic. Tables and figures are presented within this section to highlight descriptive information about subjects including in the research sample. There is also a discussion measurement and scaling procedures used to quantify the research variables, including tables detailing descriptive qualities of research data. The final segment consists of a review of the statistical approaches used to analyze the data, and a rationale for each of three steps involved in the analysis process.

Rationale for the Study

From 2013 to 2016, only half of the DKCPS high school seniors indicated in their annual graduate survey that they intended to attend a four-year college. Data for the 2015 academic year show that over half, specifically 4,432 out of 8,009 DKCPS graduates, did enter into a two-year or four-year college during the fall semester immediately following graduation. However, 2014 data revealed that 20 out of 165 alternative high school graduates entered into a two-year or four-year college during the fall semester immediately following graduation. These findings indicate that only 12.1% of DKCPS alternative high school graduates pursued a post-secondary education within a year of graduation. According to these data, DKCPS students receiving a diploma from an

alternative high school are four times less likely to attend college immediately after graduation when compared with their comprehensive high school counterparts.

Beyond the graduation data, there is limited information about the college readiness levels for alternative high school enrollees within DKCPS. The fundamental academic skill levels found within the alternative high school graduates might provide some explanation for the lower college enrollment rates or other behavioral factors could influence the process. The purpose of this research study, then, is to examine and compare high-risk students enrolled in alternative high schools with similar students enrolled in comprehensive high schools, particularly with regarding to sociocultural, academic, and personal variables associated with college readiness.

Purpose of the Study

Alternative education seniors are graduating from DKCPS alternative education schools with a high school diploma; however, there has not been a determination whether they are provided with the same necessary fundamental skills as the comprehensive school counterparts and if they are college and/or career ready. Investigating the efficacy of alternative high schools for meeting the learning needs of students at high risk for academic failure is important because there is a lack of empirical information on the topic. Few studies exist in the literature that explore key factors related to college readiness or lack thereof when children identified during early adolescence are placed within alternative schools and programs during the high school years. There are not many studies employing causal-comparative designs, where groups of students with similar academic risk characteristics are followed throughout high school and compared relative to college readiness and overall school achievement.

Aron (2006, p.18) stated that far too few rigorous studies have been undertaken that examine student outcomes and program effectiveness in the alternative program literature, which is particularly critical in an era of increased educational accountability. Therefore, the current research seeks to provide evidence regarding the major determinants of college readiness and successful learning outcomes for high-risk students in both alternative and comprehensive high school settings. This study was structured to examine the sociocultural, academic, and personal profiles for these two groups of students during a four-year period of high school enrollment.

Research Questions

The following research questions were used to guide the data collection and analysis strategies for this study:

I. Are there significant differences in the academic and sociocultural variables related to college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades?

II. What academic and behavioral variables are found to be explanatory of college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades?

III. Is there a significant difference in the profile of academic and behavioral variables found to be explanatory of college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades?

Study Design

It is generally understood in the education industry that research design is defined as a structuring of procedures for collection and analysis of data in a way that relates specifically to the study's purpose with objectivity and accuracy. Given this standard approach for effective scientific inquiry, there are two conventional structures used to guide the methods for producing empirical evidence for answering research questions—the experimental design and the non-experimental design (Gay, Mills, & Airasian, 2009; Franklin & Osborne, 1971). In the physical sciences and medicine, it is often possible to conduct studies using experimental designs. Much of this type of research involves clinical trials and laboratory work, where the investigator can exercise considerable control over study conditions, including case selection, timing of data collection, and physical manipulation of research variables. However, studies in the social and behavioral sciences are most commonly conducted in field-based settings, where the investigator has little or no control over various components of the research process (Seltiz, Wrightsman, & Cook, 1976; Johnson, 1977). This limitation requires the use of non-experimental methods for answering research questions. The current study falls into this latter category.

Specifically, a causal-comparative research design was used to answer the three-research question posed within this study. This design allowed for two groups of students with similar characteristics to be selected from the target school district. These two groups were compared relative to key research variables that detailed their academic risk status and other variables related to behavior and school performance. Equally important in the design was the longitudinal dimension of the data collection

process, which allowed for comparisons over the four-year period of high school enrollment for student included in the research sample. Thus, the current study employs both causal-comparative and longitudinal approaches for meeting the defined research objectives. The sampling strategies, measurement, and data analysis methods all conformed with this quasi-experimental approach to answering the research questions. These research components will each be presented in subsequent discussions.

Definition of Terms

The following definitions will be used in this study:

1. Alternative Education School - schools that are considered non-comprehensive high schools and provide educational programming for adolescents that cannot be met in a traditional school environment.
2. High Risk/At-Risk Student –students who are at risk of academic failure
3. Minority Student – students of Indian, Asian, South Pacific, Hispanic, African American, African, and Hispanic descent.
4. Non-Minority Student – students of white, European descent

Data Collection Process

Consistent with the design qualities of the current study, the sampling approach was twofold and included both probabilistic and purposive components. The primary purpose of the study was to examine the efficacy of alternative high schools for student at high risk of academic failure. Therefore, sampling methods targeted individuals meeting the academic criterion of high- risk, yet there was also the need for selecting comparable students enrolled in comprehensive high schools. This second group of subjects formed a

“*comparison*” (or “*control*”) group for the quasi-experimental described in the previous discussion.

The sampling method was completed in stages. Initially, the student enrollment database maintained by personnel from a large, suburban school district located in the Mid-Atlantic region of the United States was accessed for identifying students meeting the criterion of high-risk at the end of middle school (i.e., 8th grade). This process resulted in the creation of a total sampling frame of 1,202 students from which the “*alternative school*” and “*comprehensive school*” cohorts were selected. Next, a purposive sampling procedure was used to populate the alternative school cohort. Enrollment data in the school district database to determine which students from the sampling frame were enrolled in alternative schools. All students meeting the criterion of alternative enrollment were selected from the sampling frame, resulting in a cohort of 128 subjects.

The third step of the sampling process involved the selection of a control group for this quasi-experimental study. After removing the alternative school enrollees, a statistical algorithm was employed to randomly select 150 students enrolled in comprehensive high schools from the sampling frame. Specifically, there were

Table 5. Demographic Profile for Research Sample (N=278)

Category	Frequency	Percent	Cumulative Percent
Gender of Subject			
Female	101	36.3%	36.3%
Male	177	63.7%	100.0%
Ethnicity of Subject			
Latino/Hispanic	29	10.4%	10.4%
Black/African Amer.	237	85.3%	95.7%
White/European Amer.	4	1.4%	97.1%
Asian/Pacific Islander	1	0.4%	97.5%
Native Amer. & Other	7	2.5%	100.0%
Homeless Status of Subjects			
Homeless	4	1.4%	1.4%
Not Homeless	274	98.6%	100.0%
Income Status of Subject			
Free/Reduced Cost Meals	179	64.4%	64.4%
No Meal Cost Support	99	35.6%	100.0%

1,074 students whom remained in the sampling frame after the alternative cohort was established, and approximately 15% of these students were selected at random to form the second cohort for this study. As result of this sampling procedure, there were two cohorts followed throughout the four-year high school period defined for this investigation. One cohort reflected a purposive sample of alternative high school subjects ($n = 128$), and a second cohort was comprised of a randomly selected sample of comprehensive high school subjects ($n = 150$) for a total research sample of ($N = 278$). Table 5 presents a descriptive profile of the subjects included in this study. Regarding gender, there were 101 females (36.3%) and 177 males (63.7%) in the research sample. Figure 4 presents a graphic display of background data, with male subjects comprising the larger segment of the pie chart for gender. A large majority of the subjects selected

for the study were African American, with 237 (85.3%) having this ethnic background. The second largest ethnic group in the study was Latino, as reflected by a frequency of 29 (10.4%). There were four (1.4%) White subjects in the sample and seven (2.5%) falling within the category of Native American and "Other." One subject in the sample identified as Asian. As displayed in Figure 4, African American subjects formed the larger segment of the pie chart for ethnicity, with Latino subjects forming the second largest pie chart segment.

The housing status of subjects is also reflected in Table 5, with a large majority of subjects, 274 (98.6%) reported as "Not Homeless" in the school district database. Only 4 (1.4%) subjects were reported to have been "Homeless" at some interval during the four-year period of data collection. Having such a small percentage of subjects comprising the Homeless group, it was not helpful to generate a graphic model for this data element. Eligibility for government support for school meals served as a proxy measure for family income. More specifically, those students to whom meal support was given came from homes with incomes at or below the federally defined poverty level. A majority of subjects selected in the study, 179 (64.4%) received "Free/Reduced Cost Meal," and were thereby defined as existing at the poverty level. The remaining subjects, 99 (35.6%), received "No Meal Cost Support" and were defined as being from moderate

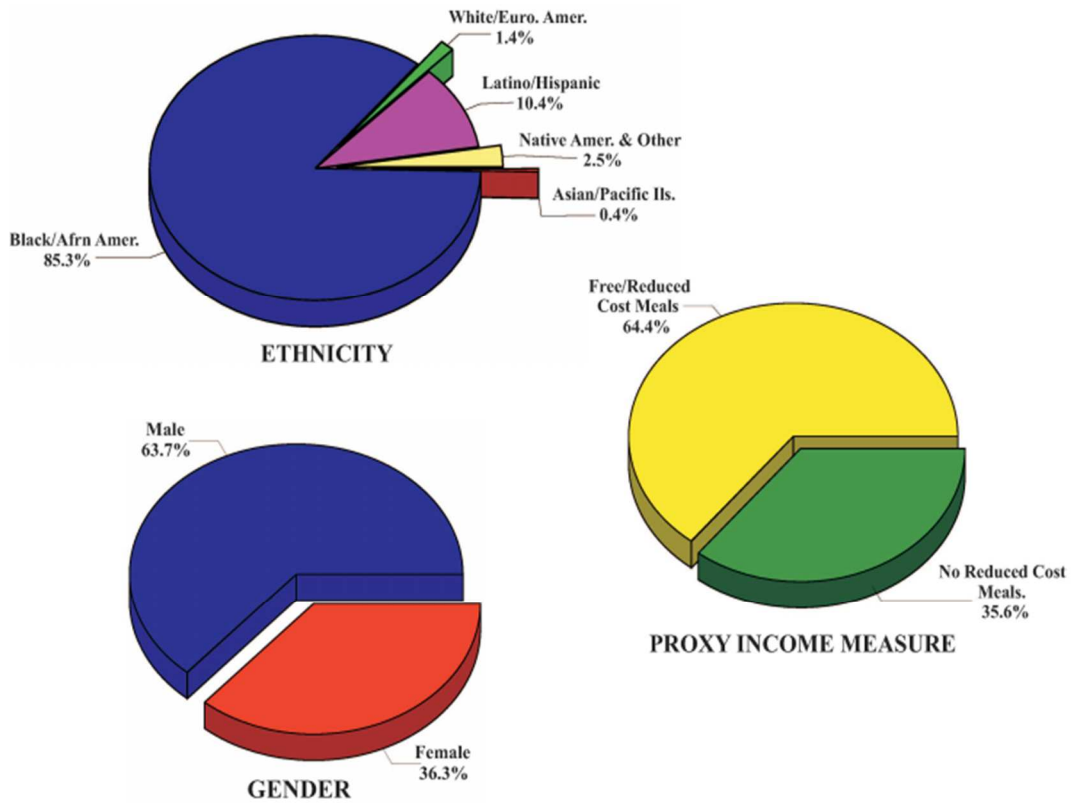


Figure 4. Pie Chart of Subject Background Information

income families or higher. The pie chart with the proxy measure of family income displays the preponderance of subjects included in the sample from poverty level households.

Data Analysis

Data for this study were gathered over a four-year period for subjects included

in the research sample. As discussed earlier, a comprehensive database maintained personnel for the target school district was the source of research variables used to examine alternative program efficacy. Both discrete and continuous variables were incorporated into the research design.

Table 6 presents descriptive statistics for the discrete variables that formed an educational profile for the sample. School enrollment status was defined by dichotomous measure reflecting if a student identified in the original 9th grade cohort dropped out during the four-year periods.

As reflected in the table, 69 (24.8%) of the subject permanently withdrew from high school, with 209 (75.2%). Two other dichotomous measures were used to reflect special education status and college placement testing. A majority of the subjects (267 or 96.0%) were defined as regular education students, which 11(4.0%) subjects were identified as special education students.

Table 6. Educational Profile for Research Sample (N = 278)

Category	Frequency	Percent	Cumulative Percent
School Enrollment Status			
High School Dropout	69	24.8%	24.8%
Non Dropout	209	75.2%	100.0%
Educ. Program Status			
Spec. Educ./504 Program	11	4.0%	4.0%
Regular Education	267	96.0%	100.0%
SAT Participation Status			
SAT Taken	90	32.4%	32.4%
SAT Not Taken	188	67.6%	100.0%
Alt. Educ. Program Status			
Enrolled in Alt. Educ.	128	46.0%	46.0%
Not Enrolled in Alt. Educ.	150	54.0%	100.0%
High School Diploma Status			
Graduated in 4 years	162	58.3%	58.3%
Graduated in 5 years	38	13.7%	71.9%
Did Not Graduate	78	28.1%	100.0%

Table 6 also displays a discrete variable indicating participation or non-participation in alternative education program, which was already discussed earlier as the primary research variable for this study. In review, 128 (46.0%) subjects were purposely selected to for *alternative school* cohort and 150 (54.0%) were randomly selected for the *comprehensive school* cohort. A discrete measure with three levels was used to indicate graduation status. A majority of the subjects selected for the study, 162 (58.3%) received their high school diploma in four years. A special extension of the data collection process was added to reflect students whom received a high school diploma in five years, with 38 (13.7%) subjects falling into this category. A total of 78 (28.1%) subjects did not graduate from high school within the four-year or extended five-year period. Most of these 78 subjects were also defined as dropouts in a prior measure.

Returning to the focus on measurement type, there were seven continuous variables included in the study. These research variables differed in focus and range, yet addressed important aspects of a subject's academic performance. During the latter part of the 8th grade year, a measure was created to indicate a student's probability of successfully completing the first year of high school (i.e., 9th grade.). The possible values for the measure ranged from .00 to 1.00, with values of .70 or lower defining a subject student as being at "*high risk*" for failing in the 9th grade. Table 7 presents summary data for the continuous variables used in the study. The mean early warning probability value for this research sample was $\bar{X} = .44$ ($\sigma = .19$), with a range of .02 to

.70. During the four-year data collection period, each subject could have earned approximately 60 credits depending on the individual course schedule. Students included in the research sample attained a mean of $\bar{X} = 23.49$ ($\sigma = 12.04$) course credits. Values for this measure ranged from 0 to 57.00 course credit attained. Note that a value of 0 credits would have occurred for any subject the dropped out of school during the first marking period of 9th grade (see Table 7).

Table 7. Key Academic Variables for Research Sample (N = 278) Academic

Variable

Early Warning Problty.	.44	.19	.02 - .70
Total Credits Earned	23.49	12.04	0.00 - 57.00
SAT Scores			
Mathematics	321.11	69.31	200 - 540
Verbal	319.67	76.90	200 - 490
Written	310.85	68.77	200 - 530
School Attendance Rate	.84	.13	.08 - .99
Total Suspens./Expulsn.	2.52	3.50	0 - 18

— Also captured within the school district database were values for student performance on the Scholastic Aptitude Test (SAT). These measures, of course, included scores for each component of this college entrance examination—mathematics, verbal, and written. For the research sample, a mean score of $\bar{X} = 321.11$ ($\sigma = 69.31$) for the mathematics component of the SAT. For the respective verbal and written components of the entrance examination, mean scores of $\bar{X} = 319.67$ ($\sigma = 76.90$) and $\bar{X} = 310.85$ ($\sigma = 68.77$) were attained for this research sample. A measure of school attendance was

included in the school district database to reflect a student's consistency level for being present in classes. This measure was a proportion value based on the number of days a student was actually present in school divided by the total number of days within each academic year. Thus, the proportion values had a possible range from 0.00 to 1.00. For the research sample, the mean school attendance rate was $\bar{X} = .84$ ($\sigma = .13$), with a range of .08 to .99. Shown in Table C was also a measure of disciplinary actions for subjects included in the study. These disciplinary actions included school suspension and expulsions accumulate for each subject over the four-year period. A simple total of these combined disciplinary actions was used to reflect this academic indicator. The mean for suspensions/expulsions for the research sample was $\bar{X} = 2.52$ ($\sigma = 3.50$), with a range of 0 to 18 combined disciplinary actions.

Analysis Approach

The statistical analyses for this study were complete in three stages, based on the focus of each research questions. The first stage data analysis involved comparisons of the *alternative school* and *comprehensive school* cohorts, based on various educational and academic performance variables. Significance tests were performed on mean values or frequency data for variables described in the previous section. The test were of a causal-comparative nature, seeking to highlight any salient differences within the sample that might reflect differences in school performance and behaviors during the four high school years. For continuous data comparisons, t-tests were used for exploring probability levels of difference between defined cohorts (Ferguson & Takane, 1989; McNemar, Q. 1969). When statistical comparisons involved discrete variables,

contingency table analyses were performed to highlight cohort differences (Nachmias, & Nachmias, 2007).

In the second stage, a regression model was generated to determine which of the research variables were most influential in explaining educational and academic performance for subjects with respect to involvement in alternative high schools or comprehensive high schools.

Essentially, this analysis process involved the development of a multiple regression model that contained both continuous and discrete measures as independent variables. The dependent variable was dichotomous, reflecting membership in the alternative school cohort or the comprehensive school cohort. With this approach to multiple regression, it was necessary to use a nonparametric approach. Thus, logistic regression was used to generate an explanatory model inclusive of several independent variable with mixed measurement levels and a dichotomous dependent variable (Mertler & Vannatta, 2005; Dillon & Goldstein, 1984).

The third and final step of data analysis consisted of generating a discriminant analysis model for confirming the relative statistical value research variables defined in the regression analysis. Moreover, the regression approach explored the data from a correlational perspective, seeking to define the strength of relationships among a group of variables. Statistical significance in the multiple regression reflected only the magnitude of coefficient values. In contrast, the discriminant analysis model tested the power of the relevant variables to distinguish cohort membership in a post hoc manner. Statistical significance in this analysis revealed the causal relationship between key research variables and whether subject belonged to either of the two cohorts—alternative schools or

comprehensive schools (Hays, 1994; Winborne & Dardaine- Ragguet, 1993; Heise, 1975). Essentially, then, the discriminant analysis provided confirmation of cohort membership based on information gleaned from various research variables.

Section 3

Results

Introduction

Presented in this section are results from analyses of data gathered from sample of students enrolled in alternative high schools and comprehensive high schools during a four-year period of enrollment in the target school district. Analyses were completed in three phases, beginning with significance tests performed on key research variables to determine if the two sample groups differed beyond chance probability. Two types of tests were used in the first analysis phase, t-test and chi-square, depending of the measurement level for a given research variable.

Next, findings are presented for a multiple regression analysis performed on key research variables, using the sample group indicator as the dependent variable. Thus the regression modeling, logistic multiple regression, was necessarily used to complete the second analysis phase. Discriminant analysis findings follow the regression approach as a method of confirming the viability of various independent variables for explaining the academic performance and college readiness of subjects included in the research sample.

Final segments of this chapter offer conclusions and implications for the target school district and beyond, based on the major findings from the data analysis. The discussion provides interpretations and implications that should aid with future research in the area of high-risk students enrolled in alternative and comprehensive high schools. Further, ideas are presented that may prove helpful for administrator, teachers, and other

education professionals involved with the instructional process for students experiencing various academic and sociocultural challenges during the high school years.

The major premise of this current study is that alternative high schools are less effective in producing positive academic outcomes with high-risk students than comprehensive high schools. A causal-comparative study design incorporating a longitudinal data collection strategy was used to explore this premise based on three research questions that focused on college readiness as the major dependent variable. In review, the first research question was stated as: Are there significant differences in the academic and sociocultural variables related to college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades?

Given the methodological approach for this study, it is appropriate to specify the following research and statistical hypotheses based on the first research question:

H1: There are significant differences in the means for high-risk alternative high school students versus high-risk comprehensive high school student relative to key academic performance variables.

$$(H10: \mu_{Alt} = \mu_{Comp}; H11: \mu_{Alt} \neq \mu_{Comp})$$

As discussed in Section II, there were two different measurement levels for academic variables included in the current study. One set of research variables reflected characteristics of subjects measured at the interval and ratio levels. For variables of this nature, the t-test was used to compare outcomes for subjects enrolled in alternative high schools versus those enrolled in comprehensive high schools. A second set of research variables addressed subject characteristics measured at the nominal level. In these

instances, the chi-square test was used to determine if there were performance differences for alternative high school subjects when compared with subjects enrolled in comprehensive high schools.

Table 8. Summary of t-Tests on Key Academic Variables for Alternative (N=128) versus Comprehensive (N=150) High-Risk

Academic Variable	High School Type				t-ratio
	Alternative		Comprehensive		
	\bar{X}	σ	\bar{X}	σ	
Early Warning Probly.	.39	.17	.49	.18	-4.97**
Total Credits Earned	24.96	11.73	22.23	12.21	1.88
SAT Scores					
Mathematics	310.00	63.68	324.93	71.19	-0.94
Verbal	282.61	79.44	332.39	72.30	-2.78**
Written	291.58	58.62	316.67	70.94	-1.55
School Attendance Rate	.81	.13	.86	.13	-3.12**
Total Suspens./Expulsn.	4.05	4.25	1.21	1.92	7.36**

* $p < .05$; ** $p < .01$

Table 8 presents results of the t -test conducted on key academic variables measured at the continuous level. Specifically, the tests were used to compare subjects enrolled in alternative high schools versus those enrolled in comprehensive high schools during the four-year period of data collection. For the early warning probability variable, a statistically significant t -ratio resulted from the two-group comparison. The mean for alternative high school subjects was $\bar{X} = .38$ ($\sigma = .17$) and the mean for comprehensive high school students was $\bar{X} = .49$ ($\sigma = .18$), yielding a t -ratio of $t = 4.97$ ($p < .01$). A comparison group means for the total credits earned variable did not yield a significant t -

ratio ($t = 1.88$; *n.s.*), with respective means of $\bar{X} = 24.96$ ($\sigma = 11.73$) and $\bar{X} = 22.23$ ($\sigma = 12.21$) for the alternative and comprehensive high school subjects. Regarding SAT scores, there was one component of the test found to produce statistically different means for the two sample groups. A mean of $\bar{X} = 282.61$ ($\sigma = 79.44$) was attained by the alternative high school group and mean of $\bar{X} = 332.39$ ($\sigma = 72.30$) for the comprehensive high school group on the SAT Verbal component, resulting in a statistically significant *t*-ratio of $t = 2.78$ ($p < .01$). Comparisons of group means for the Mathematics and Written components of the SAT did not produce significant *t*-ratio, with respective values of $t = 0.94$ (*n.s.*) and $t = 1.55$ (*n.s.*).

As shown in Table 8, the school attendance rate variable proved statistically significant in the comparison of alternative and comprehensive high school subjects. A significant *t*-ratio of $t = 3.12$ ($p < .01$) was generated in this comparison of group means with the alternative high school subjects attaining a mean attendance rate of $\bar{X} = .81$ ($\sigma = .13$) and the comprehensive high school subjects a mean rate of $\bar{X} = .86$ ($\sigma = .13$). For the total suspensions variable, a statistically significant *t*-ratio of $t = 7.36$ ($p < .01$) was found in the comparison of alternative high school and comprehensive high school groups. A mean number of suspensions/expulsions of $\bar{X} = 4.05$ ($\sigma = 4.25$) was found for the alternative high school group and a mean of $\bar{X} = 1.21$ ($\sigma = 1.92$) was determined for the comprehensive high school group.

Results of group comparisons using these tests for three research variables

measured at the nominal level are presented in Table 9. As shown in the table, there were statistically significant differences for each comparison. For the variable reflecting school dropout status, there was a significant chi-square based on the McNemar variation ($\chi^2 = .60; p < .01$). The dropout rate for alternative high school group was 22.7%, with a comparative rate of 26.7% for the comprehensive high school group. The non-dropout rates were 77.3% and 73.3% for these two groups of subjects.

Table 9. Summary of Chi-Square on Key Academic Variables for Alternative (N=128) versus Comprehensive (N=150) High Risk

Academic Variable	High School Type				Chi-Square Value
	Alternative		Comprehensive		
	<i>f</i>	%	<i>f</i>	%	
Dropout Status					
Dropout	29	22.7	40	26.7	0.60** (.05) [†]
Non-Dropout	99	77.3	110	73.3	
H. S. Diploma Status					
Graduated in 4 yrs.	64	50.0	98	65.3	29.49** (.33) [†]
Graduated in 5 yrs.	33	25.8	5	3.3	
Did Not Graduate	31	24.2	47	31.3	
SAT Participation Status					
SAT Taken	23	18.0	67	55.3	22.49** (.28) [†]
SAT Not Taken	105	82.0	83	44.1	

* $p < .05$; ** $p < .01$; [‡]Based on McNemar computation; [†]Contingency Coefficient.

The group comparison regarding high school diploma status yielded a statistically significant chi-square value of $\chi^2 = 29.49$ ($p < .01$), as shown in Table 9. For the alternative high school group, 50% of the of subjects graduated in four years which contrasted significantly with the 65% rate of four-year graduation determined for

the comprehensive high school group.

There was also a sharp contrast found in the rate of subjects graduating from high school in five years, with the alternative high school group attaining a rate of 25.8% and the comprehensive high school group attaining a rate of 3.3%. The non-graduation rates of 24.2% and 31.3% were found for the alternative high school and comprehensive high school groups. The third nominal variable used to address Research Question 1 focused on SAT participation status. Comparison of the two comparison groups for this variable resulted in a statistically significant chi-square value of $\chi^2 = 22.49$ ($p < .01$). In this instance the rate of alternative high school subjects having taken the SAT was 18.0%, which contrasted sharply with the 55.3% rate found for the comprehensive high school subjects. The rates for the two sample groups not having taken the SAT were 82.0% for alternative high school subjects and 44.1% for the comprehensive high school subjects.

Findings from the statistical tests performed on academic variables for the two sample groups resulted in several significant outcomes. There were differences in the early warning means for subjects in the alternative high school group versus their comprehensive high school counterparts. Alternative school subjects had a ten percentage point greater probability of academic failure than at-risk subjects enrolled in comprehensive schools. The SAT Verbal scores for the two comparison groups also differed significantly, with comprehensive high school subjects having a higher mean score.

Attendance rates for the two sample groups were significantly different based on t-test results. The alternative group had an overall five point lower attendance rate

mean, as calculated over the four-year period of data collection. The largest mean difference in the t-test analysis occurred for the number of suspensions/expulsions for the comparison of sample groups. The mean numbers of disciplinary actions for alternative high school subjects was three points higher than that of the comprehensive high school subjects.

Findings from the chi-square analyses indicated statistically significant differences for each comparison of the two sample groups. The comprehensive high school group had a substantially higher school dropout rate than the alternative high school group, a four percentage point difference. Regarding high school completion, the comprehensive school subjects attained a higher four-year graduation rate than their alternative school counterparts. Yet, the overall high school completion rate for subjects in the sample revealed a different outcome. The overall graduation rate after five years for alternative school enrollees was 75.8% in contrast with the 68.6% for the comprehensive high school group. This difference proved statistically significant in the chi-square analysis.

Finally, the SAT participation rates for the two comparison groups were different. Over half of the comprehensive high school subjects, 55.3%, took the SAT during their junior/senior year. In contrast, the rate of participation in the SAT participation was 18.0% for the alternative high school subjects. This two group comparison yielded a statistically significant chi-square value in the data analysis.

The second phase of data analysis involved generating an exploratory regression model for identifying individual variables associated with academic development for

high-risk students during the high school years. Several variables were included in this study examining key elements contributing to college readiness for the research sample. Thus, one clear objective for the study was to determine which of these variables appeared to have greater influence in the overall academic process for high-risk students. Multiple regression modeling was ideal for exploring combinations of independent variables for the purpose of defining key relationships among these variables.

To further understand why regression analysis was used, it is necessary to review Research Question II which was stated as: What academic and behavioral variables are found to be explanatory of college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades? Similar to the first analysis, it is useful to express Research Question II in the form of a research and statistical hypotheses for continuity in the data analysis. The hypotheses are stated as follows:

HII: There is a significant explanatory relationship between the key academic and behavioral variables associated with college readiness and a student's enrollment in an alternative versus comprehensive high school.

$$(HII_0: R_{A/BVars} = 0; HII_1: R_{A/BVars} \neq 0)$$

Logistic regression was used in this analysis because the nominal-level dependent variable and several nominal-level independent variables were used in model

formulation. In the analysis, the dependent variable was membership in the alternative high school or comprehensive high school group. The rationale for this approach was more fully explained in Section II. Also, the technique for generating the final explanatory regression model incorporated conditional inclusion of independent variables. Therefore, only those independent variables that contributed moderately to the multiple correlation were included in the final model. Thus, weaker variables were

Table 10. Summary of Logistic Regression of the Alternative vs. Comprehensive Groups Dependent Variable on Key Academic Independent Variables (N=278)

Independent Variable	Mean (Mode [‡])	Std Dev (Range [‡])	Partial Coefficient	
			Wald	B
Early Warning Probability	.44	.18	.07	.62
Total Credits Earned	23.49	12.04	4.00*	-.09*
SAT Score: Verbal	319.11	76.90	3.41*	.01*
School Attendance Rate	.85	.12	.51	1.77
Total Suspensions/Expulsions	2.52	3.50	9.01**	-.40**
H. S. Diploma Status [‡]	1	1-3	.75	-.79
SAT Participation Status [‡]	2	1-2	.00	.00
Multiple Correlation[†]			.76**	
Multiple Coefficient of Determination[†]			.58	

* $p < .05$; ** $p < .01$; [‡]Note that mode and range values were generated for discrete variables.
[†]Nagelkerke statistic.

excluded.

Table 10 presents the results of the logistic multiple regression analysis. As shown in the table, seven independent variables were statistically integrated into the explanatory model. A high multiple correlation of $R = .76$, which proved statistically significant at the 99% (i.e., $p < .01$). The coefficient of determination, $R^2 = .58$,

suggesting a moderately high level of explanatory power for the combination of independent variables. Stated more succinctly, the set of academic and behavioral variables included in the regression model explained 58% of a subject's status as alternative high school enrollee or a comprehensive school enrollee.

Three of the independent variables included within the regression model had statistically significant partial regression coefficients. The variable reflecting total credits earned yielded a partial regression coefficient of $B = .09$, with a significance test value of $Wald = 4.00$ ($p < .05$). SAT Verbal scores were also significant in the regression model, with a partial regression coefficient of $B = .01$ and a significance test value of $Wald = 3.41$ ($p < .05$). The third variable in the regression model that contributed significantly to the overall correlation level was the number of total suspensions/expulsions. For this independent variable, the partial regression coefficient of $B = .40$ and test value was $Wald = 9.01$ ($p < .01$).

Findings from the logistic regression analysis suggest that seven variables included in the research design were generally significant in explaining a subjects status as being enrolled in an alternative versus a comprehensive high school over the four-year period of data collection. The multiple correlation derived from the seven independent variable include in the model was high, indicating a reasonably strong explanatory power for the model. In fact, the multiple coefficient of determination indicated that nearly 60% of the variance in academic and behavioral performance for the sample was explained by the variables selected for the study.

A few of the independent variables offered a statistically significant contribution to the regression model. The strongest of these contributions was the variable reflecting

disciplinary incidents during high school. Total credits earned contributed significantly to the regression model as well, with the second highest value on the *Wald* test statistic. Scores on the SAT Verbal component were also statistically significant in the regression model, yielding the third highest value on the *Wald* test statistic.

Phase three of the data analysis for this study focused on confirming the explanatory power of variables identified in the logistic multiple regression. As discussed in the previous segment, seven independent variables emerged as contributing to the statistically significant multiple correlation generated in the regression model. Three of the variables in the model yielded partial regression coefficients that were also statistically significant. Multiple regression focuses on relationship strength among a group of independent variables with regard to a criterion or dependent variable. In this study, the dependent variable was necessarily defined as a subject's membership to one of two predetermined groups. These groups reflected the major premise for conducting this study, which was essentially to determine the efficacy of alternative high schools versus comprehensive high schools for meeting the educational needs of high-risk students. Thus, the dependent variable in the multiple regression analysis was discrete in nature that dictated the use of the logistic approach to regression modeling.

Again, multiple regression in any application provides information on variable relationships and explanatory values of each independent variable. Yet, the regression approach does not answer the important question for discriminatory power of variables as a composite group. As such, discriminant analysis is an appropriate technique that is

useful for determining the discriminatory power of several variables that form a composite or pattern. In this current study, then, discriminant analysis was used to “confirm” viability of those key academic and behavioral variables that emerged from the regression analysis for defining group membership for subjects included in the research sample. Specifically, this analysis strategy was employed to answer Research Question III, stated as: Is there a significant difference in the profile of academic and behavioral variables found to be explanatory of college readiness and successful learning outcomes for high-risk students enrolled in alternative schools versus high-risk students enrolled in comprehensive schools during the high school grades?

As was the approach used in the two previous analysis phases, Research Question II will be expressed in the form of a research and statistical hypotheses. As such, the following hypotheses are stated:

HIII: There is a significant discriminatory pattern of key academic and behavioral variables associated with college readiness, which can distinguish students enrolled in an alternative high school versus a comprehensive high school.

$$(HIII_0: A_{A/BVars} = 0; HIII_1: A_{A/BVars} \neq 0)$$

Shown in Table 11 are results of the discriminant analysis for the two sample groups based on independent variables identified in the logistic multiple regression analysis. It is important to note that the discriminant analysis method is iterative and perfective, which results in a refined model that includes only those variables contributing to the statistical function. Similar to the multiple regression approach used

in the previous analysis phase, only those independent variables that demonstrated an ability to explain variance were included in the final model. As seen in Table 11, six of the seven variables defined in the regression analysis proved useful in optimizing the discriminant function. One independent variable, SAT participation status, was eliminated. It is likely that there was overlap in the variance estimation for this omitted variable when considering the fact that SAT Verbal scores remained in the model.

A moderately high correlation of $R_c = .62$ was generated in the analysis, which corresponded with a statistically significant Wilks's Lambda ($\Lambda = .62$, $p < .01$). Even more critically, the combination of variables that emerged in this discriminant analysis was capable of correctly classifying case with 80.2% accuracy. These collection of independent variables identified in the regression analysis and further refined in this analysis phase defined a pattern that determined a subject's group membership

Table 11. Summary of the Discriminant Analysis of the Alternative vs. Comprehensive Groups using Key Academic Variables to Define the Function

Independent Variable	Structure Coefficient	Function Coefficient	Classification Coefficient	
			Alt H.S.	Comp H.S.
SAT Score: Verbal	-.65	-.62	.18	.18
Total Suspension/Expulsion	.57	.54	.61	.35
Early Warning Probability	-.38	-.23	1.92	3.95
School Attendance Rate	-.24	-.34	69.92	74.03
Total Credits Earned	.15	.69	.48	.39
H. S. Diploma Status	.06	.23	12.75	12.10
Canonical Correlation		.62		
Wilks's Lambda		.62**		
Cases Correctly Classified		80.20%		

* $p < .05$; ** $p < .01$; ¹Note that these coefficient values are standardized.

with high accuracy. The discriminant function distinguished subjects within both the alternative high school group and those within the comprehensive high school group independent of a membership identification status. The variable pattern of key academic and behavioral variables was capable of defining group membership on its own with high accuracy.

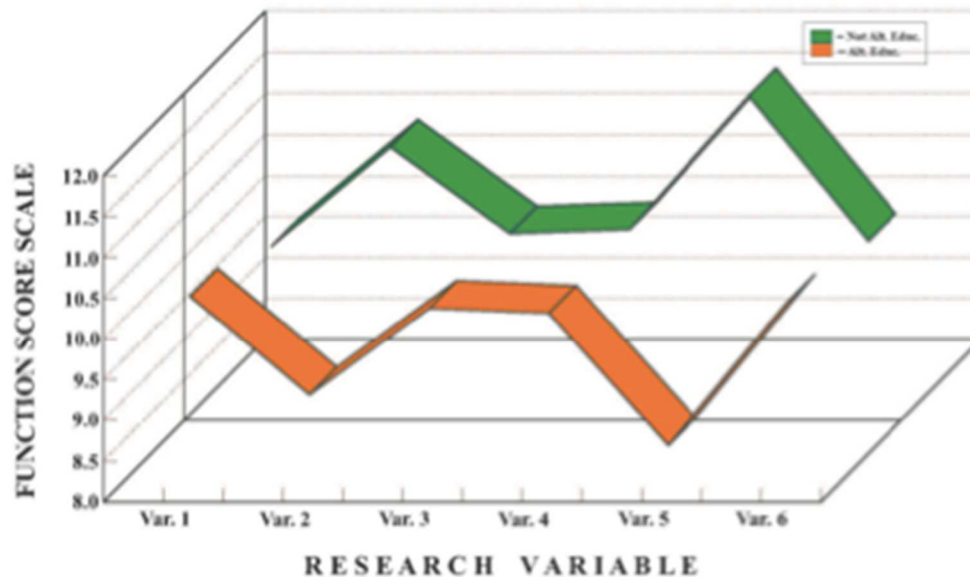


Figure 5. Pattern Diagram for Discriminant Function Derived from Key Research Variables

Figure 5 presents a graphic display of the six variables included in the discriminant function. The function scale, the *Y*-axis, reflects a standardized score value for each variable. The alternative high school group is defined by the orange colored line and the comprehensive high school group by the green line. Variables one through six on the graph's *X*-axis correspond with the same order of research variables displayed in Table 11. For example, "*Var. 1*" represents SAT Verbal score, "*Var. 2*" represents total suspensions/expulsions, and so on. There is clearly a difference in the profile or pattern for the two respective sample groups, based on the graphic representation. In the middle of the graph, for variable "*Var. 3*" and "*Var. 4*," the profiles tend to converge, yet the

other variables in the profile diverge considerably from one another. The graphic display, then, supports the finding that there is a difference in the school performance data for the two groups, as statistically explained by the significant lambda value ($\lambda = .62, p < .01$).

The relative contribution of each independent variable to the discriminant function, Table 11 lists their function coefficients. The function coefficients represent the relative contribution of a given independent variable to the discriminating power of the function. Also in this case, the same three independent variables from the multiple regression that yielded statistically significant partial regression coefficients also had the highest function coefficients in this discriminant analysis. The independent variable for total credit earned was found to be the highest function coefficient of $r_{fc} = .69$. A function coefficient of $r_{fc} = .62$ was calculated for the SAT Verbal score variable, which was second highest in the discriminant analysis, followed by the total suspensions/expulsions variable with a function coefficient of $r_{fc} = .54$.

In essence, findings from the discriminant analysis confirmed the statistical viability of independent variables identified and the logistic regression analysis for explaining differences between the two sample groups. Six of the seven variables identified in the previous data analysis phase were included in the discriminant function, and the function itself was able to classify cases with a high accuracy level. Based on the function generated in this analysis, subjects were identified as belonging to the alternative high school group or the comprehensive high school group with an accuracy level 80.2%.

Further, three variables in the study: (1) total credits earned; (2) SAT Verbal scores; and (3) total suspension/expulsion emerged as the strongest contributors to the discriminant function, which corresponded directly with the contribution of these same

variables to the previously discussed logistic multiple regression model. The other three independent variables in the discriminant analysis had low to moderate coefficients, yet did contribute uniquely to the overall effectiveness of the discriminant function.

Conclusion, Recommendations and District Impact

Multiple reports emphasize the importance of developing alternative pathways for at-risk students to graduate; however, there is still a need to increase the quality of alternative schools (Almeida, Steinberg, & Cervantes, 2010; Almeida, Steinberg, Santos, & Le, 2010; Deyé, 2011, Reimer & Cash, 2003). Conducting this study provided the researcher with the opportunity to examine what has always been believed to be a significant void in most local educational school systems. There has always been questions about what differences exist between regular comprehensive educational settings and their alternative educational setting counterparts. More specifically, whether alternative schools for high-risk students provide the same educational opportunities as traditional comprehensive high schools. And if there is a difference in quality, then how does that impact the future of students who attend non-traditional alternative schools? In this study the researcher was able to conduct a longitudinal study over a five-year high school period, which was able to chronicle the academics, behaviors, and performance level of similar students in comprehensive and alternative schools in one urban school district. The researcher employed a quantitative analysis approach to examine specific variables that proved to have a significant impact on high-risk alternative students. It is important to note that multiple statistical analyses were applied to these variables to

provide evidence that the research approach taken validated the findings of the researcher.

This researcher believes the data reveals that there are distinct advantages and disadvantages to attending an alternative school setting as opposed to a comprehensive school setting. When the researcher analyzed the continuous variables (Table 8), the first statistic that stood out was that if a student was indicated on the Early Warning Probability (EWP) list of not passing the ninth grade the first time, that student was much more likely to end up in an alternative school. The data clearly identified that the lower students were on the probability list, the higher their statistical chances of ending up in an alternative school. Also, it was clearly evident that there were higher incidents of the disciplinary nature and higher absenteeism rates, as well as lower overall SAT scores for those students who attended alternative schools. The one positive noted in the initial t-Test analysis was that alternative school students typically accumulated more total credits than their counterparts in a comprehensive high school. A major factor for this could be explained that more alternative high school students remained in high school beyond four years, thus giving them more time to attain more credits.

In the next analysis the researcher took a look at three discreet data sets, which had mixed results at first glance. Although SAT participation was much lower for alternative school subjects, what clearly stood out was that alternative schools had a much higher overall graduation rate and a much lower overall dropout rate. When closely examining the graduation data, the researcher discovered that comprehensive high school students had a higher four year graduation rate, but when combined with the fourth and fifth year graduation rate, the alternative schools' percentage of students with

high school diplomas outpaced that of the comprehensive students by seven percent, 75.8% as opposed to 68.8%. This has significant value in terms of high-risk students. This means that when high-risk students attend an alternative school, they are much more likely to graduate, even if it does take five years. Also noted is that alternative students take the SAT test at a much lower participation rate, which suggests that there is much more work to be done in increasing the academic focus of the alternative settings.

While the purpose of this study was to conduct a comparative study of alternative and comprehensive schools to determine if alternative students were being prepared to be college and career ready at the same rate of their comprehensive school counterparts, this researcher believes that the data clearly answers that question. The data show that alternative school students are clearly achieving far less on the academic variables defined in this study. This leads one to believe that alternative students are not being provided with the same opportunities as their counterparts in comprehensive high schools. Clearly, they attend school a lower rate and achieve significantly less on the Scholastic Aptitude Test, in all three areas. They also have a much higher percentage of disciplinary incidences, as well as much less participation in college preparatory activities. This speaks clearly to the academic curricula challenges that continue to plague alternative schools; however, this researcher believes that the data also shows some significant advantages for high-risk students in attending alternative settings. The data revealed that not only do alternative education students typically garner more credits than comprehensive students, they also graduate at a higher rate and conversely have a much lower drop out rate than their comprehensive counterparts. The National Dropout Prevention Center/Network supports alternative schooling as an effective strategy in

response to the nation’s dropout problem (Smink & Reimer, 2005). If one of alternative school’s main goals is to keep students from dropping out, then clearly they are meeting arguably the most important goal. In this study, by focusing on high risk students both in alternative and comprehensive high schools we can clearly see the positive impact that the alternative setting has on high-risk students when it comes to graduating and receiving their high school diplomas. We also know that attaining a high school diploma not only has a short-term impact on students’ sense of accomplishment and self-esteem, but it also has a more sustained long-term impact on the students’ quality of life. As outlined in Table 12, The Bureau of Labor Statistics found that weekly median annual earnings in 2017 for a high school dropout were \$520; \$720 for a high school graduate; and \$1,173 for a college graduate with a bachelor’s degree. Multiplying those weekly figures by 52, the annual earnings for a high school dropout amounts to \$27,040, compared with \$37,440 for a high school graduate, and \$60,996 for a college graduate.

Table 12. Unemployment rates and earnings by educational attainment, 2017

Educational attainment	Unemployment rate (%)	Median usual weekly earnings (\$)
Doctoral degree	1.5	1,743
Professional degree	1.5	1,836
Master's degree	2.2	1,401
Bachelor's degree	2.5	1,173
Associate's degree	3.4	836
Some college, no degree	4.0	774
High school diploma	4.6	712
Less than a high school diploma	6.5	520
Total	3.6	907

Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.
Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics

Students who face many of life's academic and sociocultural challenges sometimes are labeled high-risk and many end up in alternative education settings. While many would argue that, inherently, there are many disadvantages to attending an alternative school from an academic standpoint, the data seems to suggest that while they may have work to do improving the academic rigor, alternative schools do provide the supports that enable high-risk students to earn a high school diploma. This single accomplishment has the ability to offer one of our most vulnerable student populations the opportunity to not only continue their education, but also to allow them to have a better chance of living a productive and more financially secure life.

Recommendations and District Implications

Conducting this study afforded me the opportunity to add research to an area in which I have been passionate since I entered education some 27 years ago. The following recommendations are provided to support and to provoke action for those educational leaders who have the ability to impact high-risk students, and to those who understand and promote the tenets that education needs to conform to the needs of all our students in 2018:

Recommendation 1: The school district only offers 240 alternative education seats, with a high school enrollment of over 40,000 students and district population of over 137,000 students. If there were over 1,200 students in the 2012 graduation cohort, this would mean that at any given time there are approximately 4,000 high-risk students just in high school in this urban district. Clearly, if the data show that alternative schools aide in supporting graduation of high-risk students, then the number of seats in these

alternative schools should be significantly increased. The district should continue to collect this data and have its Department of Research and Evaluation to continue with this longitudinal study to assess how many alternative seats they may need to add to the alternative high schools.

Recommendation 2: The data show that high-risk alternative students can and do engage in school. The school district has a responsibility to be creative in developing ways to engage the high-risk student fully into the educational process. The school system should offer more programs of interest to high-risk alternative students such as, Career and Technical Education (CTE) classes, while simultaneously providing the supports and personnel to ensure that rigor is increased at alternative schools. These type of programs will not only increase the academic rigor, but will foster skills that these students will need as they transition to secondary education, technical school, or the workforce. Over the last fifteen years, the K-12 educational trend has deviated from the traditional vocational school setting because in today's society the skills necessary for the world of work are the same skills needed to be prepared for college. Hence, the term "college and/or career ready" has become the new mantra of K-12 populist. The high-risk alternative student must be included in this transition of the new focus of K-12 education to Career and Technical Education.

Recommendation 3: Studies show that students don't suddenly become at-risk/high-risk when they enter high school. There are traits that students display and variables that present themselves at the early primary grades which are not linked to a learning disability. The school district should develop metrics (Early Warning Probability System) to identify students beginning in elementary school who could

potentially fall into the high-risk category. In-school supports for students who are at high-risk beginning in these lower grades should be developed and implemented. I am not advocating for elementary or middle alternative schools; however, I am advocating for identification and a support plan to be developed for students who may fall into this category in the lower grades. After systemic study, if the need be present, then the school district could look to create alternative settings with the goal of re-introducing these younger high-risk students back into the comprehensive setting as soon as possible. These alternative settings could be schools within a school or completely separate schools.

Recommendation 4: Finally, this research was unique in that the data used for this study is not readily available to the typical researcher. The school system should take pride in the fact that it began the process of creating the Early Warning Probability System some time ago in the district. This created the opportunity to analyze the success and/or lack of success in the alternative and comprehensive setting. Now that the school district has access to this data and the results of this study, district leaders need to examine how they are actually supporting high-risk students in the comprehensive education setting. The results clearly show that high-risk comprehensive students have a lower graduation rate and conversely a higher dropout rate than their alternative school counterparts. If more of the high-risk students currently reside in comprehensive schools, then clearly more supports should be given to these previously identified students to ensure graduation from high school. Even if that simply means that students are identified and encouraged to spend at least one additional year in high school.

Recommendations for Future Research

In this quantitative study, the researcher limited his study to one urban school district and used the data from one cohort of students over a four-year period. The researcher used certain academic and sociocultural variables to identify differences in high-risk students who attend alternative high schools as opposed to comprehensive high schools in one school system.

Inherent in this study is the limitation of scale and size. Future studies can enhance these findings by comparing multiple school districts and/or by increasing the sample size of both groups, to increase the knowledge and understanding of the explanatory differences between the academic and sociocultural variables that affect the college and career readiness of alternative and comprehensive school high-risk students.

Also future studies should seek to add additional variables that could further assist the confirmation of explanatory factors that are significant in showing the differences between alternative and comprehensive school settings. Future studies should also seek to analyze specific curricula and programmatic differences in alternative and comprehensive schools. This will further enhance the ability to create and recreate the alternate learning environment best suited for educating the whole high-risk alternative school student.

Appendix A

SENATE BILL 362

P3, E4

7r1415
CF 7r1414

By: Senator Conway

Introduced and read first time: January 25, 2017

Assigned to: Judicial Proceedings and Education, Health, and Environmental Affairs

A BILL ENTITLED

1 AN ACT concerning

2 **Public Information Act – Records Relating to Alleged Job-Related Misconduct**
3 **by Law Enforcement Officers**

4 FOR the purpose of providing that a certain record relating to alleged job-related
5 misconduct by a law enforcement officer is not a personnel record for purposes of the
6 Public Information Act; authorizing a custodian to deny inspection of certain records
7 relating to alleged job-related misconduct by a law enforcement officer, subject to
8 certain conditions; defining a certain term; altering a certain definition; and
9 generally relating to the Public Information Act and records relating to alleged
10 job-related misconduct by law enforcement officers.

11 BY repealing and reenacting, with amendments,
12 Article – General Provisions
13 Section 4-101, 4-311, and 4-351
14 Annotated Code of Maryland
15 (2014 Volume and 2016 Supplement)

16 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
17 That the Laws of Maryland read as follows:

18 Article – General Provisions

19 4-101.

20 (a) In this title the following words have the meanings indicated.

21 (b) "Applicant" means a person or governmental unit that asks to inspect a public
22 record.

23 (c) "Board" means the State Public Information Act Compliance Board.

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



- 1 (d) "Custodian" means:
- 2 (1) the official custodian; or
- 3 (2) any other authorized individual who has physical custody and control
- 4 of a public record.
- 5 (E) (1) "LAW ENFORCEMENT OFFICER" HAS THE MEANING STATED IN §
- 6 3-101 OF THE PUBLIC SAFETY ARTICLE.
- 7 (2) "LAW ENFORCEMENT OFFICER" INCLUDES:
- 8 (I) AN OFFICER WHO SERVES IN A PROBATIONARY STATUS; AND
- 9 (II) AN OFFICER WHO SERVES AT THE PLEASURE OF THE
- 10 APPOINTING AUTHORITY OF A COUNTY OR MUNICIPAL CORPORATION.
- 11 [(e)] (F) "News media" means:
- 12 (1) newspapers;
- 13 (2) magazines;
- 14 (3) journals;
- 15 (4) press associations;
- 16 (5) news agencies;
- 17 (6) wire services;
- 18 (7) radio;
- 19 (8) television; and
- 20 (9) any printed, photographic, mechanical, or electronic means of
- 21 disseminating news and information to the public.
- 22 [(f)] (G) "Official custodian" means an officer or employee of the State or of a
- 23 political subdivision who is responsible for keeping a public record, whether or not the
- 24 officer or employee has physical custody and control of the public record.
- 25 [(g)] (H) "Person in interest" means:
- 26 (1) a person or governmental unit that is the subject of a public record or a
- 27 designee of the person or governmental unit;

1 (2) if the person has a legal disability, the parent or legal representative of
2 the person; [or]

3 (3) as to requests for correction of certificates of death under § 5-310(d)(2)
4 of the Health – General Article, the spouse, adult child, parent, adult sibling, grandparent,
5 or guardian of the person of the deceased at the time of the deceased's death; OR

6 (4) AS TO REQUESTS FOR RECORDS OF AN INVESTIGATION OR
7 ADJUDICATION OF ALLEGED JOB-RELATED MISCONDUCT BY A LAW ENFORCEMENT
8 OFFICER, INCLUDING RECORDS OF ANY DISCIPLINE IMPOSED, THE LAW
9 ENFORCEMENT OFFICER OR THE INDIVIDUAL WHO MADE THE ALLEGATION.

10 [~~(b)~~] (I) (1) "Personal information" means information that identifies an
11 individual.

12 (2) Except as provided in § 4-355 of this title, "personal information"
13 includes an individual's:

14 (i) name;

15 (ii) address;

16 (iii) driver's license number or any other identification number;

17 (iv) medical or disability information;

18 (v) photograph or computer-generated image;

19 (vi) Social Security number; and

20 (vii) telephone number.

21 (3) "Personal information" does not include an individual's:

22 (i) driver's status;

23 (ii) driving offenses;

24 (iii) five-digit zip code; or

25 (iv) information on vehicular accidents.

26 [~~(i)~~] (J) "Political subdivision" means:

27 (1) a county;

- 1 (2) a municipal corporation;
2 (3) an unincorporated town;
3 (4) a school district; or
4 (5) a special district.

5 [~~(j)~~] (K) (1) "Public record" means the original or any copy of any
6 documentary material that:

7 (i) is made by a unit or an instrumentality of the State or of a
8 political subdivision or received by the unit or instrumentality in connection with the
9 transaction of public business; and

10 (ii) is in any form, including:

- 11 1. a card;
12 2. a computerized record;
13 3. correspondence;
14 4. a drawing;
15 5. film or microfilm;
16 6. a form;
17 7. a map;
18 8. a photograph or photostat;
19 9. a recording; or
20 10. a tape.

21 (2) "Public record" includes a document that lists the salary of an employee
22 of a unit or an instrumentality of the State or of a political subdivision.

23 (3) "Public record" does not include a digital photographic image or
24 signature of an individual, or the actual stored data of the image or signature, recorded by
25 the Motor Vehicle Administration.

26 4-311.

1 **(A) FOR PURPOSES OF THIS SECTION, A RECORD OF AN INVESTIGATION OR**
2 **ADJUDICATION OF ALLEGED JOB-RELATED MISCONDUCT BY A LAW ENFORCEMENT**
3 **OFFICER, INCLUDING A RECORD OF ANY DISCIPLINE IMPOSED, IS NOT A PERSONNEL**
4 **RECORD.**

5 **[(a)] (B)** Subject to subsection **[(b)] (C)** of this section, a custodian shall deny
6 inspection of a personnel record of an individual, including an application, a performance
7 rating, or scholastic achievement information.

8 **[(b)] (C)** A custodian shall allow inspection by:

9 (1) the person in interest; or

10 (2) an elected or appointed official who supervises the work of the
11 individual.

12 4-351.

13 (a) Subject to subsection (b) of this section, a custodian may deny inspection of:

14 (1) records of investigations conducted by the Attorney General, a State's
15 Attorney, a municipal or county attorney, a police department, or a sheriff;

16 (2) an investigatory file compiled for any other law enforcement, judicial,
17 correctional, or prosecution purpose; **[or]**

18 (3) records that contain intelligence information or security procedures of
19 the Attorney General, a State's Attorney, a municipal or county attorney, a police
20 department, a State or local correctional facility, or a sheriff; **OR**

21 **(4) RECORDS OF AN INVESTIGATION OR ADJUDICATION OF ALLEGED**
22 **JOB-RELATED MISCONDUCT BY A LAW ENFORCEMENT OFFICER, INCLUDING**
23 **RECORDS OF ANY DISCIPLINE IMPOSED.**

24 (b) A custodian may deny inspection by a person in interest only to the extent
25 that the inspection would:

26 (1) interfere with a valid and proper law enforcement proceeding;

27 (2) deprive another person of a right to a fair trial or an impartial
28 adjudication;

29 (3) constitute an unwarranted invasion of personal privacy;

30 (4) disclose the identity of a confidential source;

6

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1 (5) disclose an investigative technique or procedure;

2 (6) prejudice an investigation; or

3 (7) endanger the life or physical safety of an individual.

4 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect
5 October 1, 2017.

Appendix B

Annotated Code of Maryland: Diplomas and Certificates

13A.03.02.09

.09 Diplomas and Certificates.

A. The types of diplomas and certificates specified in §§B—D of this regulation shall be awarded to any student who meets the requirements for award.

B. Maryland High School Diploma. Except as provided in Regulation .12 of this chapter, and in §C of this regulation, to be awarded a Maryland high school diploma, a student shall:

(1) Complete the enrollment, credit, and service requirements as specified in this chapter;

(2) Complete local school system requirements; and

(3) Satisfy one of the following:

(a) Achieve a passing score as established by the Department on the Maryland High School Assessments for algebra, biology, English, and government;

(b) Achieve a combined score(s) as established by the Department on the Maryland High School Assessments;

(c) Achieve a score as established by the Department on Department-approved substitute assessments for algebra, biology, English, and government, aligned with the Maryland High School Assessments such as Advanced Placement examinations, SAT I, SAT II, ACT, and International Baccalaureate examinations;

(d) In school years 2016—2017 and beyond, if a student is unable to meet the requirements in §B(3)(a)—(c) of this regulation, then satisfactorily complete the requirements of the Bridge Plan for Academic Validation as set forth in Regulation .06E of this chapter; or

(e) Prior to the 2016—2017 school year, if a student has taken an HSA-aligned or PARCC-aligned Algebra I and/or English 10 course and has passed the course(s) but failed the assessment aligned with the course(s) that student is exempt from completing a Bridge Plan for Academic Validation.

C. Any student who has taken an HSA-aligned or PARCC-aligned Algebra I and/or English 10 course prior to the 2016—2017 school year may meet the graduation requirements for Algebra I and/or English 10 in the following ways:

(1) Passing the course(s) and passing the assessments aligned with the Algebra I and/or English 10 course; or

(2) Passing the course(s) and taking the assessment aligned with the Algebra I and/or English 10 course at least one time.

D. Maryland High School Diploma by Examination.

(1) General Educational Development Testing Program. A Maryland High School Diploma by Examination may be awarded for satisfactory performance on approved general educational development tests if the student meets those requirements as defined in Labor and Employment Article, §11-808, Annotated Code of Maryland, and COMAR 09.37.01.04.

(2) Maryland Adult External High School Diploma Program. A Maryland High School Diploma by Examination may be awarded for demonstrating competencies in general life skills and individual skills on applied performance tests if the student meets those requirements as defined in COMAR 09.37.01.20.

E. Maryland High School Certificate of Program Completion.

(1) This certificate shall be awarded only to students with disabilities who cannot meet the requirements for a diploma but who meet the following standards:

(a) The student is enrolled in an education program for at least 4 years beyond grade 8 or its age equivalent, and is determined by an IEP team, with the agreement of the student and the parents of the student, to have developed appropriate skills for the individual to enter the world of work, act responsibly as a citizen, and enjoy a fulfilling life, with the world of work including but not limited to:

(i) Gainful employment;

(ii) Post-secondary education and training;

(iii) Supported employment; and

(iv) Other services that are integrated in the community; or

(b) The student has been enrolled in an education program for 4 years beyond grade 8 or its age equivalent and will have reached age 21 by the end of the student's current school year.

(2) An Exit Document that describes the student's skills shall accompany the Maryland High School Certificate of Program Completion.

(3) The final decision to award a student with disabilities a Maryland High School Certificate of Program Completion will not be made until after the beginning of the student's last year in high school.

(4) A student with significant cognitive disability may not meet high school graduation requirements, in accordance with §B of this regulation, if a student:

(a) Participates in an Alternative Assessment based on Alternative Academic Achievement Standards (AA-AAAS); and

(b) Continues to receive instruction based on Alternative Academic Achievement Standards through high school.

(5) If a student participates in a graduation ceremony prior to the completion of the student's education program, at the ceremony the school system shall issue to the student a Certificate of Achievement or other similarly titled certificate in place of a diploma.

F. Local Endorsements. Consistent with procedures established by the Department, each local school system may add endorsements to the diploma as incentives for students to meet locally established requirements and outcomes in instruction beyond the minimums specified by the State.

Appendix C

Annotated Code of Maryland: High School Assessments

13A.03.02.06

.06 Maryland High School Assessments.

A. A student shall take the requisite Maryland High School Assessment during its next regular administration if the student received credit for taking, by the methods identified in Regulations .03 and .04 of this chapter, any of the following courses aligned with the Maryland High School Assessment:

- (1) Algebra;
- (2) Biology;
- (3) English; or
- (4) Government.

B. To be awarded the Maryland High School Diploma, all students, including elementary and middle school students who take high school level courses, shall take the Maryland High School Assessment for algebra, biology, English, and government after the student completes the required course.

C. Each local school system shall provide appropriate assistance to strengthen areas of weaknesses for students who have not achieved satisfactory scores on the Maryland High School Assessments.

D. Each student who failed a Maryland High School Assessment once may participate in the Bridge Plan for Academic Validation and shall be provided at least one opportunity to retake the appropriate assessment in accordance with the testing schedule issued by the Department.

E. Bridge Plan for Academic Validation.

(1) Eligibility Criteria. Except for the students identified in §G of this regulation, a student shall participate in the Bridge Plan for Academic Validation if the student has:

- (a) Failed one or more Maryland High School Assessments at least twice;
- (b) Received a passing grade and earned credit in the course or courses related to the assessment or assessments;
- (c) Demonstrated overall satisfactory attendance in the most recent school year completed; and
- (d) Demonstrated satisfactory progress toward achieving the high school diploma requirements specified in COMAR 13A.03.02.09B(1) and (2); and
- (e) Participated successfully in appropriate assistance as defined in §C of this regulation after having failed one or more of the Maryland High School Assessments.

(2) The Bridge Plan for Academic Validation shall consist of:

- (a) Specific modules developed by the Department in each of the Maryland High School Assessments content areas;
- (b) The assignment by the local school system of one or more modules for completion by each student meeting the eligibility criteria;
- (c) Scoring by the local review panels of the completed modules according to State-developed, Statewide scoring protocols;
- (d) A recommendation from the local review panels to the local superintendent as to the outcome of the scoring of each student's module or modules;
- (e) Acceptance or rejection by the local superintendent of the local review panel's recommendations; and
- (f) An opportunity for the student to appeal the local superintendent's decision to the State Superintendent of Schools.

F. Reporting Student Performance.

(1) A school system shall state on the student's performance record card only that the student has or has not met all assessment requirements and shall not describe the option used to meet the requirement.

(2) For the purpose of this section, except for students identified in §G of this regulation, "met all assessment requirements" means achieving a passing score on all Maryland High School Assessments, or meeting the requirements of the combined score option, or successfully completing a Bridge Plan in those assessment areas that the student did not pass.

G. For students who are graduating in school years 2016—2017 and 2017—2018 and who are first-time test takers of Algebra I and/or English 10 in those school years, if a student has taken an Algebra I and/or English 10 course and has passed the course(s) but failed the Maryland High School Assessment aligned with those course(s), that student is exempt from completing a Bridge Plan for Academic Validation and will have met the assessment requirement for Algebra I and/or English 10.

Appendix D

Advocacy Design Study Questions

1. What are the observed work strategies and practices?
(PASS 9: Instructional Strategies)

(5) individual workbook (1) cooperative learning, collaborative
(5) textbook questions (1) real work, adult applications
(5) answers without explanation (1) public explanation display

1. Situation Analysis: Our School Now / Our Math Program Now
Using our field notes, describe your observations.

Our School is mostly (s) Our Math Program is mostly (m)

Technical 5 4 3 2 1 Constructivist
Illusory / mixed

2. Description of Our Best Future: School and Math Program

3. What we need to know/do in order to make student work more effective.

Q.2. With whom do students work? What is the logic or sequence of their work?

Teacher

(5) Individual tutor (1) leader of public discourse

(5) purveyor, checker (1) coach, facilitator

With Other Students as

(5) parallel workers, same jobs (1) interdependent peers

With Other Adults as

(5) Sources of info (1) interactive learners, mentors family

Q3. What kinds of materials and tools do students use in their work?

(PASS 13: Computers—PASS 14: Equipment-Supplies)

- | | |
|-----------------------|--|
| (5) no materials | (1) multi-source, multimedia, internet |
| (5) workbooks, sheets | (1) multi-source, multimedia, internet |
| (5) school materials | (1) tools of adult work settings |

Q4. What are the work spaces and how are they organized?

- | | |
|------------------------------|---------------------------------|
| (5) isolated seats | (1) for teams, temporary groups |
| (5) non-specialized, general | (1) resource centers |
| (5) traditional classroom | (1) adult work settings, labs |
| (5) standardized | (1) variety of settings |

Q5. How is the classroom managed?

- | | |
|-------------------------|----------------------------------|
| (5) authoritarian adult | (1) active, collaborative |
| (5) teacher enforced | (1) self-directed, curiosity |
| (5) prescribed rules | (1) informal, like adult workers |
| (5) public rebukes | (1) indirect control |

Q6. What are the work patterns within the class?

- | | |
|------------------------------------|--|
| (5) short-term specified tasks | (1) interdependent work, project tasks |
| (5) series of school work problems | (1) long term real work with scaffolding |

Section B. What does it mean “to know”?

Q7. How do students create knowledge?

- | | |
|-------------------------------------|---|
| (5) teacher acceptance, corrections | (1) with critical error analysis |
| (5) recalling text | (1) socially construct knowledge |
| (5) individual subjects | (1) integrated, problem based, concept |
| (5) directed instructions | (1) lab, applied technique in new setting |

Q8. How are students to demonstrate their learning? (PASS 8: Instructional Practice)

- | | |
|------------------------------|--|
| (5) artificial exercises | (1) create authentic, varied, useful product |
| (5) replication of masters | (1) generate, display new forms |
| (5) produce expected answer | (1) respond to open questions |
| (5) traditional test, drills | (1) demonstrate / exhibit understanding |

Q9. How are students' curiosities and competencies incorporated in school work?

- | | |
|-------------------------------|---|
| (5) not explicitly considered | (1) student team initiated projects |
| (5) prescribed content | (1) talents nurtured, exhibited |
| (5) standardized work | (1) student initiated research projects |
| (5) attempted homogeneity | (1) diverse backgrounds expressed, valued |

Q10. What order thinking skills are evident in school work?
(PASS 7: Instructional Program Characteristics)

- | | |
|---------------------------|---|
| (5) simple recall | (1) problem identification, divergent opinion |
| (5) facts | (1) understanding, concept driven |
| (5) non-critical | (1) creative, evaluative, critical |
| (5) disjointed, illogical | (1) persuasive, logical, thematic |

Q11. How do students relate their learning to their lives in the community?

(PASS 8: Instructional Practices)

- | | |
|----------------------|---|
| (5) private thoughts | (1) personal experience as focus of study |
| (5) unlinked | (1) contextualized, occupational link |

(5) impersonal text

(1) service learning, community development

Q12. In what ways is student learning organized into a meaningful, sequential and coherent instructional program?

(PASS 6: Instructional Program)

(5) random courses, track

(1) coherent themes

(5) separate courses

(1) interdisciplinary units

(5) annual organization

(1) multi-year assignments, looping

(5) work assigned without support

(1) scaffolding for projects

(5) unrelated field experiences

(1) shadow-mentor-intern

(5) individual classroom rules

(1) consistent, coherent class rules

II. How is the school organized?

(PASS 4: Align Plans, Structure, Practices)

Q13. How does the school group or place students, thereby controlling access to instruction and services? Who make these decisions?

(PASS 17: Pupil Personnel)

(5) categorical, pullouts, age graded

(1) inclusive, multi-age

(5) specialist teams assigned

(1) teacher-based, parents engaged

(5) special entry tests, criteria

(1) self-advocate, declared interest

(5) probable destiny tracks

(1) common core with special courses

(5) traditional, high stakes test

(1) ongoing evaluation and grouping

Q14. How are facilities and school time used? What is the flow and cycle of activities?

(PASS 12: Library, Multi-Media Center)

(PASS 19: Non-instructional Resources)

(5) rigid schedule

(1) flexible schedules

(5) segmented blocks

(1) large, enriched blocks

- | | |
|----------------------------------|------------------------------------|
| (5) assigned standard spaces | (1) activity spaces, open schedule |
| (5) standard classrooms | (1) adult work settings |
| (5) formal, official spaces | (1) informal gatherings |
| (5) study center, limited access | (1) open multimedia center |
| (5) regular school day, week | (1) extended day, week, weekends |

Q15. How are students organized for their school career and what continuity is provided?

(PASS 6: Instructional Program Implementation)

- | | |
|--|---------------------------------|
| (5) random groups annually constituted | (1) continuing cohort |
| (5) individually selected sources | (1) core studies for all |
| (5) teacher determined grade level content | (1) reference to core standards |
| (5) no identity groupings | (1) family I advisory groups |

Q16. How do adults relate to each other within the context of the school?

- | | |
|--|--|
| (5) "My job" orientation/ work to contract | (1) broadened roles, sense of community |
| (5) separated by specializations | (1) integration of instructional/support |

teams

- | | |
|----------------------------------|---------------------------------|
| (5) socially detached, seniority | (1) partners/mentors integrated |
|----------------------------------|---------------------------------|

Q17. What do staffing patterns look like for the educational program (within the school?)

(PASS 5: Staff Qualifications)

- | | |
|--------------------------------------|---|
| (5) professionally inexperienced | (1) professionally experienced |
| (5) non-certificated | (1) certificated |
| (5) grade level teams | (1) disciplinary, interdisciplinary teams |
| (5) collection of individuals | (1) collaborating teams, task groups |
| (5) disproportionate teacher support | (1) adult engagement with students |

Q18. How do external agencies and families relate to the school?

(PASS 15: Parent Participation

PASS 18: Securing Resources)

- | | |
|--------------------------------------|---------------------------------|
| (5) loosely linked by referrals | (1) collaborative planning |
| (5) detached external services | (1) co-located, school based |
| (5) low, formal parental involvement | (1) family engagement |
| (5) passive recipient of allocation | (1) seeks resources, grants |
| (5) reluctant partners | (1) active, sustained, advocacy |

III: How is the school governed?

Q19. How is the school governance system representative of the stakeholders? Who plans and/or implements the school model or design?

- | | |
|------------------------------------|--|
| (5) school employees only | (1) inclusive of community-based agents |
| (5) central office, administrators | (1) core group, team, working committees |
| (5) expert planners | (1) stakeholders, advocates |

Q.20. What commitment do stakeholder partners make to the program? What do they bring to the table?

- | | |
|----------------------------|--|
| (5) sporadic participation | (1) generate civic capacity |
| (5) goodwill, advice | (1) field experiences, mentors, access, jobs,
Teacher support |
| (5) decision protection | (1) active engagement |

Q.21. Who controls development or training of participants, (e.g. Student leadership, parent training, staff development)?

(PASS 10: Development of Staff

PASS 16: Parent Education)

- | | |
|---------------------------|-----------------------------|
| (5) centralized authority | (1) core teams, groups |
| (5) officials, employees | (1) school council, parents |

(5) school determined (1) collaborative efforts

Q.22. Who participates in inquiring into the school design or model's success?

(5) external experts (1) core group, teacher researchers

(5) official assessors (1) continuous action research

(5) designated persons (1) open thru digital media

Q.23. How is authority distributed among the participants? How are decisions made? Who has veto power?

(5) elected elites by vote (1) stakeholder consensus

(5) one governing unit (1) linked, consultative units

(5) according to contract (1) informal and informative

(5) seniority, cliques (1) constructive participation

IV. How does the school account for education?

Q.24. How will this school design or model make the school community better for all adults as well as for all children? What will it do to build civic capacity and a sense of community?

(5) narrow scope of claimed impact (1) broad focus on civic capacity, social capital

(5) official standard data sources (1) process visualization/interpretation

(5) isolated services and agencies (1) integrated, collaborative efforts

Q.25. How does the school account for adult growth?

(PASS 11: Formal Activities)

(5) limited official expertise (1) developing learning organization

(5) process accounting (1) engage in action research

(5) legal supervision (1) collaborative work, interdependency

(5) inactivity to protest (1) indicators of family satisfaction/welfare

Q.26. How will the unit monitor the quality of daily life?

- | | |
|--------------------------|---------------------------------------|
| (5) informal random talk | (1) organized family-style advisories |
| (5) individual responses | (1) focus groups, forums |
| (5) 5 student protests | (1) organized student assessments |

Q27. How does the school account for student needs and competencies? Does accounting include community service?

(PASS 17: Pupil Personnel
PASS 21: Student Performance)

- | | |
|--------------------------------|--|
| (5) standard measures, records | (1) authentic assessment, product exhibitions,
Multi-media portfolios |
|--------------------------------|--|

Q28. How does this model make use of data to determine what the children know? How are data analyzed and presented?

(PASS 22: School Effectiveness)

- | | |
|-------------------------------------|---|
| (5) cross sectional tests, slices | (1) cohort, trend analysis |
| (5) periodic report cards | (1) public career portfolios |
| (5) avoidance of teacher assessment | (1) incorporates data about teachers |
| (5) print reports | (1) uses digital media with open access |
| (5) user of commercial tasks | (1) visual interpretations of data |
| (5) annual reviews | (1) continuous assessment |

Q29. What types of information are collected; how is it distributed; and who receives it?

(PASS 20: School Assessment Program)

- | | |
|---|--------------------------------------|
| (5) personal report card, tests results | (1) competency profile |
| (5) student records | (1) community development indicators |
| (5) generalized teacher evaluations | (1) program specific assessments |
| (5) official profiles of school | (1) school-based assessment sessions |

Appendix E

Alternative Education Categories (Wehlage, Rutter, Smith, Lesko, and Fernandez)

I. INSTRUCTION

A. WORK

1. Teaching Practices
2. Teacher Role
3. Materials/Tools
4. Workplace Organization
5. Classroom Management
6. Work Patterns

B. KNOWING

7. Creation of Knowledge
8. Demonstration of Learning
9. Student Interests
10. Order of Thinking
11. Relation to Community
12. Program Sequence

II. ORGANIZATION

13. Access to Program
14. Access to Services
15. Student School Career
16. Adult Work Patterns
17. Staff Patterns
18. External Agencies

III. GOVERNANCE

19. Planning Change
20. Resources/Commitment
21. Control of Training
22. Inquiry Into Success
23. Authority Distribution

IV. ACCOUNTABILITY

24. Improving Community
25. Adult Growth
26. Monitoring Student Life
27. Student Community Service
28. Systematic Data

References

- Allensworth, E. et al. (2008). *From high school to the future: ACT preparation - too much, too late*. Chicago: Consortium on Chicago School Research, University of Chicago.
- Almeida, C., Steinberg, A., Santos, J., & Le, C. (2010). *Six pillars of effective dropout prevention and recovery: An assessment of current state policy and how to improve it*. Boston: Jobs for the Future.
- Almeida, C., Le, C., Steinberg, A. & Cervantes, R. (2010). *Reinventing alternative education: An assessment of current state policy and how to improve it*. Boston: Jobs for the Future.
- Aron, L. Y. (2003). *Towards a typology of alternative education programs: A compilation of elements from the literature*. Washington, DC: Urban Institute. Retrieved from <http://eric.ed.gov/?d=ED480992>.
- Aron, L. Y. (2006). *An overview of alternative educations*. Washington, DC: Urban Institute.
- Center for Education Statistics. (2002). *Characteristics of the 100 largest public elementary and secondary school districts in the United States: 2000-01*, NCES 2002-351. Washington, DC: Author. Retrieved from <http://nces.ed.gov/pubs2002/2002351.pdf>.
- Code of Maryland Regulations. COMAR. State of Maryland, 12 13A.03.02.06, High School Assessments.
- Code of Maryland Regulations. COMAR. State of Maryland, 12 13A.03.02.09,

Diplomas and Certificates.

Deyé, S. (2011). *A path to graduation for every child: State legislative roles and responsibilities*. Denver, CO: National Conference of State Legislatures.

Dillon, W. R. & Goldstein, M. (1984). *Multivariate analysis: methods and applications*. New York: John Wiley & Sons.

EMSTAC. (n.d.). *Elementary & Middle Schools Technical Assistance Center*. Retrieved from Behavior - Support for Positive Student Behavior:

<http://www.emstac.org/registered/topics/posbehavior/intensive/alternative.htm>.

Figure 1. *Maryland State Department of Education Graduation Requirements*. Reprinted from Maryland College and Career Standards. Retrieved

from <http://archives.marylandpublicschools.org/MSDE/programs/ccss/>.

Ferguson, G. A. and Takane, Y. (1989). *Statistical analysis in psychology and education* (6th ed.). New York: McGraw-Hill Book Company.

Fisher, R. (1954). *Statistical methods for research workers*. Edinburgh: Oliver and Boyd.

Florida Senate Bill 362. *Agency for State General Bill*. July 2017.

Gregg, S. (1999). Creating effective alternatives for disruptive students. *Wilson Web Database* 73(2), 107-113.

Hays, W. L. (1994). *Statistics* (4th ed.). Fort Worth, TX: Harcourt Brace.

Heise, D. R. (1975). *Causal analysis*. New York: John Wiley & Sons.

Kliener, B., Porch, R., & Farris, E. (2002). *Public alternative schools and programs for students at risk of education failure: 2000-01, A statistical analysis report*. Office

of Educational Research and Improvement NCES, 2002-004, U.S. Department of Education.

Konen, L. (2012, November 8). High school diploma: Ticket to nowhere. *The Fiscal Times*. Retrieved from <http://www.thefiscaltimes.com/Articles/2012/10/18/High-School-Diploma-Ticket-to-Nowhere#page1>.

Maliszewski, C. (2010). *Alternative education in New Jersey high schools: An analysis of policy and practice*. Dissertation, Mount Holyoke College, Education, South Hadley.

Maryland State Department of Education (2016). *Tool kit to determine students college and career ready under the College and Career Readiness and College Completion Act of 2013*, p. 4. Retrieved from <http://marylandpublicschools.org/programs/Documents/CCRS/CCRToolKit2016.pdf>

McDonald, A. (2002). *Best practices for at risk children*. Retrieved from <http://www.sanmarcos.net/ana/bestpractices.html>.

McNemar, Q. (1969). *Psychological statistics* (4th ed.). New York: John Wiley & Sons.

Mertler, C. A., and Vannatta, R. A. (2005). *Advanced and multivariate statistical methods* (3rd ed.). New York: John Wiley & Sons.

Moore, R., & King, J. (2005). *Tennessee's alternative schools*. Comptroller of the Treasury, Office of Education Accountability. Nashville: Tennessee Department of Education.

- Nachmias, D. & Nachmias, C. (2007). *Research methods in the social sciences* (7th ed.). New York: St. Martin's Press.
- National Center for Education Statistics. (2009, November). *Public alternative schools and programs for students at risk of educational failure: 2008-09*. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011301>
- National Dropout Prevention Center/Network (n.d.). Retrieved from <http://www.dropoutprevention.org>.
- National Governors Association (2010). *Implementing graduation counts: State progress to Washington, D.C. National Governors Association Center for Best Practices*. <http://www.nga.org/Files/pdf/1012gradcountsprogress.pdf>.
- Project, A. S. (2003). *Alternative schools: Research on policy, practice and implications for youth*. University of Minnesota. Institute on Community Integration (UCEDD).
- Promising Practices Network. *Issue brief. Promising practices for promoting high school graduation*. Retrieved from http://www.promisingpractices.net/briefs/briefs_highschoolgrad.asp.
- Porowski, A., O'Conner, R., & Luo, J. L. (2014). *How do states define alternative education?* REL 2014-038. Regional Educational Laboratory Mid-Atlantic.
- Raywid, M. A. (1989). *The case for public school choice*. Bloomington, IN: Phi Delta Kappa (ERIC ED 307 689).
- Raywid, M. A. (1994). Alternative schools: The state of the art. *Educational Leadership*, 52(1), 26-31.

- Raywid, M. A. (1990). Alternative education: The definition problem. *Changing Schools*, 18.
- Smith, F. (1990). *Advocacy Design Center: School self assessment and design questions*. New York: Teachers College, Columbia University.
- State of Maryland. COMAR – Office of the State Division of State Documents – 2009, <http://www.dsd.state.md.us.comar/searchall.aspx>.
- Reimer, M.S. & Cash, T. (2003). *Alternative schools: Best practices for development and evaluation*. Clemson, SC: National Dropout Prevention Center.
- Regina, F. M., & Lan-Sze, P. (2006). *Alternative education programs: Program and student characteristics*. The University of North Carolina Press.
- Roderick, M., et al. (2008). *From high school to the future*. Chicago: Consortium on Chicago School Research, University of Chicago.
- Schinke, S. P., Cole, & K. C., & Poulin, S. R. (2000). Enhancing the Educational Achievement of At-Risk Youth. *Prevention Science*, 1(1), 51-60.
- Skiba, R., Simmons, A., Staudinger, L., Rausch, M., Dow, G., & Feggins, R. (2003). Consistent removal: Contributions of school discipline to the school to the school-to-prison pipeline. *The Civil Rights Project*, p. 28. Harvard University.
- The American Civil Liberties Union (ACLU). (2009). *Missing the mark - Alternative schools in the State of Mississippi*. Mississippi.
- The American Academy. (2012, June 2). [Web log post]. Retrieved from http://www.theamericanacademy.com/blog/why_a_high_school_diploma_is_important.

U.S. Department of Education. (1997). *National Center for Education Statistics, Access to postsecondary education for the 1992 high schools graduates*, NCES 98-105..

Washington DC: Author.

U.S. Department of Labor. (2016, March 15). Bureau of Labor and Statistics. *Earnings and unemployment rates by educational attainment*. Retrieved from http://www.bls.gov/emp/ep_chart_001.htm.

Winborne, D. and Dardaine-Ragguet, P. (1993). Parallels and divergence in the at-risk/mainstream conversation: adolescent voices. *The High School Journal*, 76(3), 195-204.