Does Enrollment in Ohio’s Urban Arts Magnet High Schools Make a Difference on OGT Scores and the On-Time Graduation Rate? A Descriptive Study

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Milton Vaughn Ruffin, B.M., B.M.E., M.A.
Graduate Program in Music Education

The Ohio State University

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Dissertation Committee:
Professor Jan Edwards, Advisor
Professor Timothy Gerber
Professor William T. McDaniel
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ABSTRACT

The purpose of the study was to ascertain the impact of enrollment in Ohio’s arts magnet high schools, and the extent to which it contributes to OGT scores and on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students projected as 2011 on-time graduates. The six arts magnet high schools were located in six of Ohio’s largest urban school districts: Akron, Canton, Cincinnati, Cleveland, Columbus, and Dayton. The study encompassed the OGT school data reports for the cohort of students projected as 2011 graduates who entered high school in 2007, the school and district mission statements, and the publicly available disaggregated school enrollment information on websites of the state (Ohio Department of Education, 2013), the district, and the arts magnet schools. Comparisons of the 2009 state-wide OGT test results revealed that on average, passage rate for Arts Magnet Students were 3.9 percent higher in reading, 2.0 percent higher in mathematics, 4.2 percent higher in writing, 0.3 percent higher in science, and 3.0 percent higher in social studies. For Arts Magnet students, academic achievement on all five sections of the 2009 OGT was 2.7 percent higher than the State-wide average. Compared to OGT passage rate in their host districts, academic achievement was higher on all five test sections for Arts Magnet students. In the
aggregate, students in the arts magnet schools graduated on time at a rate 20.2 percent higher than the average for students in the host districts’ and 8.5 percent higher than the average for students State-wide.
DEDICATION

This document is dedicated to my wife Dr. Merlyn Ruffin, my daughter Nia Allen, Mrs. Patricia Ruffin, the late Clifton Ruffin Sr., the late Clifton Ruffin Jr., the late James and Benola Ruffin, and the late Mrs. Lucy Coleman.
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I would like to thank my wife Dr. Merlyn Ruffin, and daughter Nia for their unconditional love and support throughout the completion of this document. I am deeply grateful for the many acts of kindness, and words of encouragement that sustained me when I was discouraged.

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There have been numerous friends who have been supportive during this long process who I would like to acknowledge including; Dr. Glen Roger Davis, Dr. Bob Carpenter, Terry D. Benton, Dr. Keith Troy, Minister Brenda Troy, Kevin Turner, Dr. Cynthia Turner, Dr. Jerry McAfee, Donna Sorrell, Jeffrey Judd, the Gahanna library staff and many others.

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committee members Dr. Timothy Gerber and Dr. William T. McDaniel for their incredible insights and support.
VITA

December 17, 1960 ...........................................Born - Youngstown, Ohio

1986 ...............................................................B.M., Jazz Studies
The Ohio State University

1991 ...............................................................B.M.E., Music Education
The Ohio State University

1996 ...............................................................M.A., Music Education
The Ohio State University

2001 ...............................................................Principal/Superintendent Licensure
The Ohio State University

1991-1999 ..........................................................Band and Orchestra Teacher, Monroe
Middle School, Columbus City Schools

1994-Present ......................................................Music Director, New Salem Missionary
Baptist Church, Columbus, Ohio

1999-2005 ..........................................................Administrator/Principal, Monroe Middle
School, Columbus City Schools

2005-Present ......................................................Principal, Fort Hayes High School
Columbus City Schools

2008 ...............................................................Gospel Choir Instructor, Denison University
Granville, Ohio

2008-Present ......................................................Gospel Choir Instructor, The Ohio State
University

Fields of study

Major Field: Music Education,

Cognate: Educational Policy and Leadership
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CHAPTER 1: INTRODUCTION

“Democracy cannot succeed unless those who express their choice are prepared to choose wisely. The real safeguard of democracy, therefore is education.”

——Franklin D. Roosevelt

The term "school choice" may have diverse meanings for families, such as private school, magnet school, vocational school, and home-schooling options, but primarily the phrase conveys the notion that parents desire the best and most appropriate education for their children. As parents seek the "right fit" kindergarten through twelfth-grade (K-12) educational opportunities for their offspring, they often explore alternatives to the traditional public school. Some families choose to provide traditional homeschooling where parents are the teachers and builders of the curriculum. Others move to the school districts where test scores and graduation rate are most aligned with the desired outcomes for the education of their children. School Choice Ohio, an advocacy group for families seeking subsidized alternatives to traditional public schooling, contends in its mission statement that school choice is a result of systematic reform efforts in Ohio to expand educational opportunities across the state. The founders of School Choice Ohio believe that parents should be able to choose a school that is best for their child regardless of
income. Therefore the primary mission is to ensure that parents have a choice of a quality school, K-12 across the state (School Choice Ohio, 2013).

Due to the ruling of Brown vs. Board of Education Topeka (1954) mandating the nation’s schools to be desegregated, school districts across the country began implementing magnet school programs. In addition to offering a wide variety of curricular options and improved academic standards and performance, the magnet schools were designed to encourage racial diversity (Goldring and Smrekar, 2000). “Magnet-based choice is supported as a way to expand school choice for parents, bring innovation through specialty schools and programs and promote voluntary forms of racial integration” (Archbald, 2004, p. 283).

The concept of having a choice in public education gained a great deal of popularity in the 1970’s as a way to develop and implement desegregation plans for school districts across the United States (Farrie, 2008). Following the ruling of Morgan vs. Kerrigan (1976) that established magnet schools as a legitimate method to bring about desegregation (Yu & Taylor, 1997), the number of magnet schools increased significantly.

As parents, politicians, and community members became more dissatisfied with the productivity of public schools, the necessity for expanded curricula and alternative educational approaches and settings became an issue of national debate. In April 1983, the National Commission on Excellence in Education released the report “A Nation at Risk”. This widely publicized report declared “the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people” (A Nation At-Risk, 1983, p.5). The continued debate and concern
for the decline of public education had resulted in legislators crafting laws to mitigate the problems in failing schools. The “No Child Left Behind” (NCLB) legislation of 2001 provided support for choice through a variety of provisions. Advocates for public school choice suggested that the NCLB law promoted a racial balance voluntarily, as parents chose schools for programmatic reasons, as opposed to a court-ordered busing of children to schools in unfamiliar neighborhoods. This position of advocacy encouraged individual schools to focus on academic and programmatic excellence, and concentrate on providing quality instruction to attract students (Belfied & Levin, 2003, 2005; Hoxby, 2001, 2003; Levin, 1992). Additionally, school choice was viewed as a way to counteract the impact of socioeconomic status on access to educational opportunities. In principle, it provided options for lower income families to attend desirable schools that were traditionally readily available to wealthier families in neighborhoods with good schools (Smrekar & Goldring, 1999).

There were some who opposed the concept of school choice, and suggested that school choice would be a detriment to the neighborhood schools. Opponents of School Choice believed that choice could lead to “cream skimming” of the best students and teachers from traditional public schools. The result would further segregate the schools and school systems by race and income, consequently rendering the public schools as a dumping ground for disadvantaged students (Goldhaber, 1999). More recent studies examined the characteristics of students who opted to dropout of public schools for private schools (Epple, Figlio, & Romano, 2004; Fairlee, 2006; Figlio & Stone, 2001; Long & Toma, 1988; Lankford, Lee, & Wyckoff, 1995). These studies commonly found that student ability, family socioeconomic status, and the educational level of the parents
were positively correlated with decisions to leave public school systems to attend private schools. Several of these studies also suggested that White students were likely to enroll in private schools in metropolitan areas with large concentrations of Black students, and generally were less likely to choose private schools in areas where the level of achievement in public schools was higher suggesting the tendency for private schools to cream skim high achieving White students, particularly in areas with concentrations of disadvantaged students (Bifulco, Ladd, Ross, & Stephen, 2009).

The establishment of comprehensive high schools in the 1950’s and 1960’s was a reflection of the writings of James B. Conant (1959, 1961, and 1967). Conant believed that the diversity of the students’ backgrounds, and the programmatic variety of general academic and career course offerings could provide a well-rounded experience for students. “How to take advantage of this diversity is the challenging question facing all who would develop education in a truly democratic society” (Conant, 1938, p. 421). However, over the course of many decades, student achievement in the traditional public schools in the U. S. remained stagnant, regardless of multiple reform efforts and a doubling in total expenditures on K-12 education (Ravitch 2000, Hanushek 1986, Greene 2005).

**Statement of the Problem**

Students in Ohio’s urban districts, like students across the county, are faced with the task of graduating from high school in an era of increased accountability for teachers, administrators and schools. Students who developed academic proficiency sufficient to pass the OGT and graduate from high school on-time, is a measure by which schools are
deemed either successful or failing. Since traditional assignments to a neighborhood school is based on the parent or guardians address can result in a student attending a school designated as failing, school choice is an option for parents and students seeking enrollment in a school they choose outside of the boundaries of their neighborhood. An arts magnet school for example, is one of several options available to families interested in attending a school with a special focus, regardless of their address. Due to the lack of academic achievement successes in many public high schools, the systemic opportunity for school choice became a viable option for parents of public high school students who sought alternative educational opportunities for their children. Non-traditional approaches to educating students in alternative or “magnet” schools were designed to assist in raising the graduation rate, to increase participation among minority students, and provide engaging opportunities for students regardless of their socioeconomic status. Urban school systems have faced great challenges and schools with specialty mission such as magnet schools may offer better academic opportunities to urban students (Gamoran, 1996). An early success of the magnet school concept was The Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT) project, undertaken by the U.S. Office of Education in 1972 amid a growing concern to “humanize” the curriculum by fostering a greater infusion of the arts into the total school program (Lathrop & Boyle, 1972). As a result of the IMPACT model project, arts integration themed programs were developed and implemented in schools across the United States.

In addition to offering a wide variety of curricular options, and improved academic standards and performance, magnet schools were designed to encourage racial
diversity (Goldring and Smrekar, 2000). “Magnet-based choice is supported as a way to expand school choice for parents, bring innovation through specialty schools and programs and promote voluntary forms of racial integration” (Archbald, 2004, p. 283).

High failure rate, low standardized test scores, and dependency problems with drugs and alcohol have caused parents and politicians to feel a sense of urgency about the state of public education (Dentzer-Wheelock, 1990; Quality Education for Minorities Project, 1990). Segregated communities produced segregated public schools that exacerbated a brutal and arbitrary divide between rich and poor, minority and White, and urban and suburban (Rudden, 2002). As a result of the increased concern for the quality of urban education, many cities developed magnet schools with specialty missions (Metz, 1986). Additionally, consideration was given to facilitating private school accessibility for low-income students through a tuition-subsidized school choice program (Chubb and Moe, 1990). The Ohio General Assembly enacted the Ohio Pilot Project Scholarship Program (OPPSO) in March of 1995 to provide assistance to children in Cleveland’s failing public schools. The law provided that students could receive tutorial assistant grants as well as scholarships to attend alternative schools including private and charter. However, the law was legally challenged because some families were opting to send their children to religious schools. In the Supreme Court case Zelman vs. Simmons-Harris (Zelman, 2003), the court upheld the voucher portion (OPPSO) that challenged the separation of church and state relative to the establishment clause of the 1st amendment of the United States Constitution. The court found that the government was not acting in the capacity of advancing or inhibiting religion. Essentially, aid had to be allocated on the basis of neutral secular criteria that neither favored or disfavored religion and was
available to both religious and secular beneficiaries on a non-discriminatory basis. The Zelman decision was beneficial for poor inner-city parents and children because educational opportunities were more readily available (Russo & Mawdsley, 2003).

Public schools were confronted with increasing numbers of students who were identified as “at-risk” of school failure. Students who were considered at-risk had a high probability of academic failure and of eventually dropping out of school. Economically disadvantaged students from minority groups represented an overwhelming proportion of at-risk students (Ross, Smith, Casey & Slavin, 1995). As a result of this widespread and continued growth of at-risk students, researchers and educators persisted in investigating ways to narrow the gap between at-risk children and their peers. Arts magnet schools were developed as a way to provide an engaging educational experience that was aligned with a students interests and passions resulting in reducing the drop-out rate and ultimately increasing on-time graduation.

In six of Ohio’s large urban districts, parents have elected to send their children to a arts magnet high school as a matter of choice. The choice can reflect the desire for gifted and talented students to experience a more arts enriched curriculum, or the hope of a in-depth experience in artist development in visual, performing or literary art, or the expectation that their children will perform academically proficient or better on the OGT, and graduate on-time despite the risk-factors. Does enrollment in an arts magnet high school make a difference?
**Purpose of Study**

The purpose of the study was to ascertain, as one indicator the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students and the 2011 on-time graduation rate. In order to make these comparisons, the following research questions were used to guide the investigation.

1. To what extent do the 2009 OGT passage rate differ among students enrolled in the arts magnet high schools, the six target districts and the state?

2. To what extent do on-time graduation rate differ among students enrolled in arts magnet high schools and non-arts magnet high schools in the 6 target districts and the state?

3. Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the five content areas of the OGT?

4. Do students enrolled in the six arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than students generally in their host districts and the state?
5. To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

**Significance of the Study**

According to the Alliance for Excellent Education (2006), 1.3 million students who dropped out of high school in 2006 collectively had the potential over a lifetime to fall short of earning over $355 billion as working wage-earning adults. The difference in earnings for a high school dropout and a college graduate is roughly a million dollars over their lifetime. High School dropouts experienced unemployment more often than graduates, had a greater need to utilize government assistance, and encountered the penal system more frequently than a high school graduate (Zvoch, 2006). According to Jimerson Anderson and Wipple (2002), factors including low parental educational levels, stressed socioeconomic conditions, and learning disabilities of students profoundly impacted an administrator’s ability to strategically counter increasing dropout rate. Owings & Magliaro (1998), found that family attitude about education outweighed other mitigating factors affecting graduation that were beyond the control of schools and school administrators. In addition, the students’ engagement in extracurricular activities, and parental involvement also affected these students ability to persist to graduation (Owings & Magliagro, 1998; Zvoch, 2006).

The No Child Left Behind Act (2001) provided options for parents to select a school based on a programmatic theme and academic rigor, as opposed to a systemic reliance on the address of the parent for school assignment. Nearly seven million students were eligible for this school choice provision in the law, however only about one
percent of those eligible for the option actually chose it (U.S. Department of Education, 2009). Long before the passage of NCLB, parents in Ohio have had the option to choose schools with special themes such as arts magnet schools. There has been a tendency for arts magnet schools to target the development of the whole child by embracing the belief that students educated through this pedagogical approach would evolve into better-educated human beings. Charles Fowler, an advocate for the inclusion of strong arts programs in the schools suggests that education is incomplete without the arts. The arts extend awareness and comprehension while exploring the emotion, intuition and aspects of life deprived of reason that science finds difficult to explain (Fowler, 1994). “Interlocking the arts with American society, with our economic influence and affluence and with education as a whole is an illuminating idea” (Fowler, 1994, p. 5).

In this era of increased teacher and student accountability, decreasing operating budgets, and the federal No Child Left Behind Act (NCLB), music educators have argued that music in the curriculum can positively impact test scores, attendance, and attitudes toward school (Eisner, 1998). Several researchers have examined the effects of music participation on student academic achievement. For example, McCarthy(1980) investigated the effects of individualized instruction on achievement and the drop-out rate for 5th and 6th grade instrumental music students in an urban music program. The school was located in a northern industrial city where the median income was $10,000 at the time of the study. The community was 88 % White and 11.3 % African American. The two instructional methods used were ensemble instruction, and individual instruction. The McCarthy study isolated two measures of music reading, and the dropout rate of beginning instrumental music students in fifth and sixth grades. The assessment
instruments utilized were the *Music Achievement Test* (MAT), which measured the students’ cognitive music reading ability, and the *Watkins-Farnum Performance Achievement Scale*, which measured the students’ sight-reading ability. The students’ *Metropolitan Achievement Test* (Metro) scores in reading were used to determine the scholastic relationships. The findings showed that students with above-average scores in reading achievement scored significantly higher in sight-reading in the individual instruction setting, than those in the ensemble instruction setting. This study was included to highlight the connection between the reading content area and music, as it relates to the dropout rate in music programs in elementary school students.

Babo (2001) conducted research to investigate the impact of formal instrumental music participation on student academic achievement. This research focused on the number of years of instrumental music instruction, and the achievement data of eighth graders. Five-hundred and forty-eight middle school students from Union Township Public School District of New Jersey were selected from two schools to analyze *California’s Achievement Test* and *New Jersey Eighth Grade Proficiency Test* data in reading and mathematics. Babo found a significant correlation between instrumental music instruction and strong reading and language arts achievement. The significance of this study further supports the notion that reading and music are connected, as appropriate curricular components in school.

The combination of research reviewed in the current study provided a contextual framework intended to provide clarity and a better understanding of urban students in the state of Ohio, the arts magnet schools that they attended, and the school choice options that were available.


**Need for the Study**

In the state of Ohio and across the county, standardized testing and the on-time graduation rate have become an accountability measure for determining and predicting successful schools. There have been studies conducted that isolated factors of student achievement, student improvement, predictors for identifying at-risk students, and characteristics of failing and successful schools. However, there were gaps in the research literature that specifically examined if enrollment in an arts magnet high school in Ohio made a difference on OGT scores and the on-time graduation rate. There are different factors that impact academic performance in high school, as well as the graduation rate, however the focus on enrollment as an indicator of success on the OGT and the on-time graduation rate is an area of study that will contribute to the existing research literature in a unique way. To show the gaps, one must understand what has actually been done to date. The absence of research in this particular area was the motivation to pursue and contribute original research in this area of inquiry. This study was designed to ascertain, as one indicator the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and the on-time graduation rate.

Determining cause and effect is not the intention of this study. Rather, the goal of the study is to learn with certainty, if students enrolled in arts magnet high schools in Ohio generally score higher on the OGT, and graduate on time. The data from this study will be useful in recognizing general patterns and tendencies from which hypotheses may
be generated and tested in future studies relative to determining the cause and effect of increased OGT passage rate, and the on-time graduation rate. The research data will be informative for legislators, educational policy-makers, district administrators, and building principals who make funding and programmatic decisions, in determining the levels of support for sustaining and creating arts magnet schools. Likewise, the data will be important for parents who consider enrolling their children in an arts magnet high school in Ohio. Moreover, the data can serve as baseline data for additional study to statistically examine the relationship between the on-time graduation rate, OGT scores, and arts magnet school choice options.

Overview of Chapters in the Study

Chapter two of the dissertation contains a review of literature related to a description of the problems in urban schools, urban students, a history of school choice, magnet schools, charter schools, school vouchers, arts magnet schools and the relationship between the arts and academic achievement. In combination, these topical areas provided the basis for determining that a study to ascertain if enrollment, as one indicator in an arts magnet school, made a difference on OGT scores and the on-time graduation rate for students in six Ohio urban school districts. Chapter three presents the methodology used to describe and compare OGT scores and the on-time graduation rate. Comparisons were drawn between the magnet schools, the target school districts, as well as statewide. The data in chapter four reflected the results of the comparisons of the OGT passage rate and the 2011 on-time graduation rate, including a t-Test statistical analysis of the aggregate achievement data of the five academic content sections of the OGT.
Chapter five contains a summary, a discussion of the data comparison, conclusions, as well as recommendations for future studies, and policy recommendations.

**Limitations of the Study**

The following were limitations to the study:

1. The researcher acknowledged the study’s inability to control for the influence of transient students who, between 2009 and 2011, may move in or out of a district, its arts magnet high school, or the state of Ohio.

2. The identified individual schools for this study do not represent all eight large urban districts in Ohio identified as the Ohio 8: Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown.

3. The six identified individual schools were selected because of the existence of an arts magnet public high school in the districts: Akron, Canton, Cincinnati, Cleveland, Columbus and Dayton.

4. Arts theme charter schools were not included in the analysis due to the absence of OGT data and on-time graduation rate data reported on the state report card.

**Operational Definitions**

*At-Risk* — Students who have a high probability of academic failure and eventually drop out of school (Ohio Department of Education, 2013).

*Cohort* — the number of students who should receive a regular diploma in a specific year.
**Electronic Management Information System (EMIS)** — A statewide data collection system for Ohio’s primary and secondary education including demographic, attendance, course information, financial, and test results (Ohio Department of Education, 2013).

**Graduation Rate** — The percentage of students who entered high school and received a regular diploma or honors diploma during the reporting year; including students who graduated the summer after the 12th grade, and students who completed coursework prior to eventually passing all five sections of the Ohio Graduation Test (Ohio Department of Education, 2013).

**Interactive Local Report Card (ILRC)** — An interactive tool developed for parents, educators, lawmakers, community members and researchers to provide current and historical Local Report Card data (Ohio Department of Education, 2013).

**Magnet School** — Public schools with specialized programs that are different from the traditional neighborhood school, designed to attract students from across the school district (Ohio Department of Education, 2013).

**Ohio Graduation Test (OGT)** — Tests created in Ohio as a graduation requirement, in the academic content areas of Reading, Mathematics, Writing, Science, and Social Studies, to reflect clear and concise academic content standards, and that describe what knowledge students should acquire in grades K-12 (Ohio Department of Education, 2013).

**On-Time Graduation Rate** — The number of students who should have received a regular diploma in four years of starting the ninth grade, and actually did (Ohio Department of Education, 2013).
**Performance Level Descriptors (PLD)** — Regions on the OGT score scale that represent what students would need to know relative to Ohio Academic Content Standards at predetermined levels of achievement, such as Limited, Basic, Proficient, Accelerated, and Advanced (Ohio Department of Education, 2013).

**Report Card (State/Local)** — Annually issued school and district performance reports, detailing students’ performance on standardized statewide tests, including student attendance and graduation rate (Ohio Department of Education, 2013).

**School Choice** — A systemic process designed to afford families the opportunity to choose which school is best for their children, regardless of their level of income (Ohio Department of Education, 2013).

**Urban School Districts (Ohio)** — 1. *Urban-low median income, high poverty*: urban-low median income districts include urban districts in small or medium size towns and cities characterized by low median incomes and very high poverty rate. 2. *Major urban-very high poverty*: major urban-very high poverty districts include all of the eight largest core cities and other urban districts that encompass major cities. Population densities are very high. There are very high poverty rate and typically there is a high percentage of minority students (Ohio Department of Education, 2013).
CHAPTER 2: LITERATURE REVIEW

Graduation from high school is the main goal for the majority of students in school (Swanson & Chaplin, 2003). This chapter contains a review of literature related to a description of the problems in urban schools, urban students, a history of school choice, magnet schools, charter schools, school vouchers, arts magnet schools, and the relationship between the arts and academic achievement. In combination, these topical areas provided the basis for determining that a study to ascertain if enrollment, as one indicator in an arts magnet school, made a difference on OGT scores and the on-time graduation rate for students in six Ohio urban school districts.

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The purpose of the study was to ascertain, as one indicator the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and the on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students and the 2011 on-time graduation rate. In order to make these comparisons, the following research questions were used to guide the investigation.
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4. Do students enrolled in the six arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?

5. To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

Problems of Urban Schools

African Americans and people of color are many times concentrated in large metropolitan areas and communities in America. The hopes of securing industrial jobs in the cities, and establishing a better quality of life were reasons why many gravitated to the large urban areas. Due to the decline of industry job opportunities, many Whites fled to the suburbs leaving the urban areas in a state of gradual deterioration (West, 1994).

The exodus of stable industrial jobs from urban centers to cheaper labor markets here and abroad, housing policies that have created ‘chocolate cities and vanilla suburbs,’ White fear of Black crime . . . all have helped erode the tax base of American cities just as the federal government has cut its support and programs. The result is unemployment, hunger, homelessness, and sickness for millions (p. 9).
Many urban school districts are affected by the economic, social and political dynamics of the city, including funding disparities, negative notions of urban students and an ever-expanding bureaucracy (Alston, 2002). Ayes (1994), suggested that this growing disdain for city schools support the rationale for substandard funding levels and the collective negative criticism of urban schools.

Integration is the only hope for high quality educational opportunities for poor families, particularly families of color in urban communities (Li, 2009). Schools that are deemed high poverty with a large enrollment of African American and Hispanic students, often experience a high rate of teacher turnover, substandard facilities, and limited access to technology (Li, 2009). The No Child Left Behind Act (2001) would designate a school with these attributes as a “failing” school.

According to Wilson (1987), many urban cities have lost institutions in the neighborhoods such as churches, businesses and social clubs, which provided vital social and economic stability that helped mitigate the multi-faceted problems in urban schools. Due to the absence of economic, social and family structures in the urban areas, students are lacking the relationships that foster, encourage and demonstrate advocacy for academic achievement; resulting in the decline of social capital (Coleman, 1990). Consequently, some urban youth may have difficulty drawing upon social capital in their families and neighborhoods to strengthen and sustain their commitment to education (Anderson, 1990). Researchers have suggested two types of social capital that impact neighborhoods: “bridging and bonding” (Brisson & Usher, 2005). Bridging social capital refers to the connections between neighborhood residents and outside groups or
organizations, whereas bonding social capital consists of the interactions among neighborhood residents.

Cultural Capital Theory initially was a result of the work of Pierre Bourdieu (Bourdieu and Passeron, 1977). The basic premise for this work was the investigation of how social class was reproduced. Through the dominant class, the establishment of high-status cultural knowledge was transferred and translated through common activities such as opera, dance, theater, and museums. Bourdieu’s work was focused on French schools, and what role these schools played in the process of this cycle of reproduction. However, some researchers (Ramirez & Boli, 1987) suggested that schools could have an impact on increasing social class position. Schools could in fact neutralize the effects of cultural background and afford opportunities for membership of the dominant class. Nevertheless, Bourdieu’s (1977) research discovered correlations between family background and exposure to culture, and educational attainment. Although education was available to everyone, the French system of creating the social hierarchy was still being reproduced. Cultural capital is the method of translating inequities in background to different educational outcomes resulting in social and economic rewards. This structure would perpetuate the social stratus by reproducing the dominant class as dominant, establishing the social economic status. Cultural Capital Theory is a part of a larger process of class reproduction (Bourdieu, 1977; Robinson and Garnier, 1985).
**Urban Students**

In a school culture where language, class, and culture differences are seen as deficits, racial and ethnic minorities often feel powerless (Cummins, 1986; Noguera, 1996, 2001). Intervention efforts by schools that are designed to close the achievement gap often focus on blaming minority students for what are perceived as cultural deficits in them individually, in their families, and in their communities (Herbert, 1999). School officials often see parents as adversaries instead of supporters of their children's education (Huang & Gibbs, 1992; Noguera, 1996, 2003). Differences in cultural values and family structure is to blame for poor academic achievement according to school officials, and parents in turn blame discrimination and insensitivity by school personnel as the cause. (Atkinson & Juntunen, 2001).

Access to knowledge is contingent upon specific codes that enable the sustaining of the culture of power. The culture of power is the established structure that perpetuates the dominance of resources in society, and ensures a stratified socioeconomic system. There are five aspects of power (Delpit, 2006, p.25): issues of power are enacted in the classroom; there are rules for participating in power; the rule of the culture of power reflects the culture that has the power; gaining access to the culture of power is easier when told explicitly the rules of the culture; and finally, those with the power are least likely to acknowledge existence of power as opposed to the acknowledgment of the existence of power by the powerless.

Research conducted by Suh and Suh (2007) identified significant risk factors and risk factor combinations that often characterized dropouts. This study found 16 predictors to be significant to at-risk dropouts: low grade point average (GPA) in the
eighth-grade, low socioeconomic status (SES), prior school suspensions, students’ expectation to remain in school next year, enrichment risk, excessive absenteeism, two-parent household, physical environment risk, sexually active prior to age 15, household size, peers expectation and planning to attend college, metropolitan area resident, region, perception toward teachers, history of fights at school, and threat of harm. Low GPA, low SES, and behavioral problems, were the three main risk categories identified by this study that had the greatest impact on students deciding to dropout.

At risk learners are “children of school age, who because of one or more factors in a syndrome of disadvantageous traits, behaviors and circumstances, are in danger of being unsuccessful in school and/or in danger of becoming enmeshed in personally debilitating social, emotional, physical, or economical difficulties currently or in the near future” (Sartin, 1989, p. 61). This crisis of students being at risk of dropping out of school is generally explained as a dysfunction of the student’s home, and the lack of study and social skills, which facilitates the student being identified as at-risk (Levine, 1998; Macchiarola, 1998; Sartain, 1989; Swanson, 1991).

The characteristics of at-risk students have been researched in an effort to contribute to the understanding of the influences that cause a student to drop out of school. Without an understanding of the phenomenon, there will be a replication of a system that consistently loses too many of its students (Catteral, 1985). According to Craig (1997), some of the characteristics of students who dropped out of school were that the student had low self-esteem, the student was older than many of his classmates due to being retained, the student routinely got poor grades, the student had conflicts with students and teacher, the student got pregnant, the student had problems being a single
parent, and the student had a learning disability that had gone unnoticed, uninvestigated, or undiagnosed. The term "at-risk students" or "students at risk" is defined differently depending on the source (Hardman, Drew, & Winston-Egan, 1996; Heward & Orlansky, 1992). Shields (2001, p. 275) defined at-risk students as “those enmeshed in debilitating social, emotional, physical, academic, and economic difficulties, whose individual configurations of assets and deficits may have diminished their likelihood of success in school and society”.

Research has suggested a relationship between student achievement patterns and socio-economic status (Allington, 1995; Allington, 2001; Levine and Levine, 2000; Manzo, 2003). Kinney (2010) conducted a study that identified non-music predictors such as academic achievement, socioeconomic status, family structure, ethnicity, gender, and student mobility to determine initial enrollment and retention in an urban middle school band program. Student academic achievement was measured in sixth and eighth grades. Reading and Math scores on the state proficiency test for the sixth graders, and the *McGraw-Hill Terra Nova Multiple Assessments* were utilized for the eighth graders. Participation in the federal free and reduced lunch program distinguished students as lower socioeconomic status. The findings of the Kinney study indicated that academic achievement played a statistically significant role in students’ decisions to select and stay enrolled in middle school band programs. Kinney found that students who achieved higher academically, and were from a two-parent household were more likely to begin and persist in the band program. Additionally, female students and students of a higher SES also were more likely to begin and persist in a band program.
The 2005 National Report Card (National Center for Educational Statistics, 2006) reported that 46% of the nation’s low-income fourth-grade students could read at or above a basic level compared to 76% of the average high-income students. Students from low-income families scored significantly lower on standardized reading tests than students from more advantaged families at grades four, eighth, and 12 (National Center for Educational Statistics, 2006). “Poverty is not the only factor that determines if a child is at risk for reading difficulties, however, it is the most pervasive one” (Cunningham and Allington, 1999, p. 1). Bemak, Chung, and Siroskey-Sabdo (2005), reported that the dropout rate for students in extremely distressed, impoverished neighborhoods could be at-risk as much as three times the national average.

According to the National Center for Education Statistics (2002), 55.1% of dropouts were male; 44.9% were female. In addition, the dropout rate in 2000 for 16 to 24 year olds was 10.9%; White non-Hispanic students represented a dropout rate of 6.9 percent; Black non-Hispanic students dropped out at a rate of 13.1%, while the dropout rate of Asian/Pacific Islanders was the lowest at 3.8 percent; and the Hispanic dropout rate was the highest at 27.8%.

A significant factor regarding low student achievement is teacher expectation. Expectations are inferences made by teachers about present and future academic achievement that tends to be self-sustaining, affecting the teacher’s perception, and interpretation of the student’s action (Bamburg, 1994). High percentages of black children are lagging behind white students, thus creating the urgent dilemma of an achievement gap. This crisis in education is usually rationalized by simply blaming the victim. Some researchers suggest that this educational condition is not solely a matter of
student motivation and learning (Rush, 2001; Ford & Thomas, 1997), but also the expectation of the teacher. In fact, research suggests that the expectation of the teacher is even more important than the race and gender of the teacher (Kunjufu, 1990). The Metropolitan Life Survey of The American Teacher 2000: Are We Preparing Students For The 21st Century suggested that teachers’ expectations for students’ goals after graduation was much lower than what the students had indicated. Seventy-one percent of the high school students that responded to the survey indicated that they planned to attend a four-year college, while the teachers predicted that about 33% of the students planned to attend a four-year college. A teacher’s genuine belief in a student’s success can be a significant factor in motivating a student to believe in themselves (Rush, 2001). Stereotypes left unchecked and unchallenged about groups of students’ ability to achieve, and others inability to achieve, cause teachers to have low expectations, which in turn, negatively affect student achievement (Rush, 2001). Negative teacher-student relations, non-supportive classroom climate, not enough time to understand the material combined with disinterest and the lack of motivation, are all factors that contribute to a students’ underachievement (Ford & Thomas, 1997). As a result, these students will be less likely to ask for help and expect support from the teacher, which leads to the students' gradual withdrawal from the learning process. Schools where the achievement gap is beginning to narrow tend to have highly competent teachers with high expectations for all children, also considered “unconditional race neutrality” (D’Amico, 2001).

There have been many documented stories of White teachers successfully teaching Black children. The prevailing questions, though, are if the majority of White
teachers are aware of the strategies to effectively teach Black children, and if they are willing to learn these strategies to achieve success with these students (Irvine, 2002).

The concept of relevance is a key element to the strategic efforts of White teachers achieving success with Black students. This argument implies that teaching should always be context-dependent. Gay (2002) contends that the paradigm in which the pedagogy is delivered and situated needs to be connected culturally to the students or it will continue to marginalize underachieving groups.

Students who come from disadvantaged backgrounds and become disengaged with their education diminish their opportunity to advance academically and socially. Lacking basic skills to function in adult society, these children are more at-risk of being high school dropouts, and they dramatically escalate their risk of unemployment, poverty, poor health, and involvement in the criminal justice system (Rothstein, 2004).

**History of School Choice**

Historically, the need and functionality of schools in America was clear but large inequities existed in the system. Reformers such as Horace Mann, the Secretary of Education for the state of Massachusetts in the late 1800’s and early in the 1900’s, discovered that there were major discrepancies in schools. He contended that schools varied widely in their composition and purpose (Mondale & Patton, 2001). Access to education at that time mostly favored the children of the wealthy who had the ability to finance their education without the need for their children to help support the family. Conversely, the poorest children would not consider attending school because they were needed by their families to labor at home (Good, 1999).
By the turn of the century, high schools were accessible mostly to those individuals who were college bound (Codding, Rothman, and Tucker, 1999). As America began to shift from the agrarian way of life to an industrial and technologically advanced society, many Americans migrated to the big cities seeking better opportunities to work at higher wage jobs. In the 1900’s, three quarters of the workforce were expected to work in large factories using more of their physical strength yet still having to show some degree of mental acuity (Codding, Rothman, and Tucker, 1999). As a result more and more workers were required to be literate. Consequently, high schools were expected to prepare workers to meet this minimum requirement. To accomplish this, high schools enrolled millions of students, including immigrants who were barely literate in any language (Mondale and Patton, 2001).

School choice as an educational strategy emerged in response to the 1954 decision in Brown versus the Board of Education of Topeka, which challenged the racial segregation of public schools (Fuller, Elmore, & Orfield, 1996). Application of this ruling from the court was seen by some as simply allowing specifically Black students a choice between a two-tiered racially separated system (Fuller, Elmore, & Orfield, 1996). Southern segregationists considered this a reasonable response to the Court’s intended freedom of choice. Implementation of school choice options for schools across the United States was not quickly embraced by southern school districts. McCarver Elementary School in Tacoma, Washington, founded in 1968, was the first magnet school created to reduce segregation. Only after the U.S. Supreme Court ruled in 1973 that northern cities must also desegregate, did choice become a widespread alternative to mandatory desegregation (Wells, 1993).
An intellectual interest in school choice dates back many decades. In fact, from the early 1970’s, the Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT) program has been a fixture in public education as a school choice option. However, it was not until the 1980’s that the concept of school choice continued to evolve, and the options for families, expanded with the implementation of different kinds of magnet schools including Science Technology Engineering and Math (STEM) schools, Vocational schools, and Arts Integrated schools. Research studies were critical of the monopoly-like structured public education and seemingly ineffective support for innovation and efficiency (Chubb and Moe, 1990; Coons and Sugarman, 1977; Everhart 1982; D. Levine and Havighurst, 1977; Nathan, 1989; Peterson, 1990; Toch, 1991; Waldrip, Marks, and Estes, 1993).

Debate over how school choice affected the distribution of educational opportunities hinges on two social facts. First, segregation of low-income, African American, and Hispanic children in the public school systems would continue on a widespread basis (Farley and Frey 1994; Jargowsky, 1997; Kahlenberg, 2001; Orfield et al, 1997), and, second, the persistent deficits in academic achievement among lower-income and minority children would persist. School choice as an option for parents and students, is a mitigating strategy that provides a liberating scenario for students trapped in an educational program that is ineffective. The liberation model suggests that the option of school choice can help alleviate these problems (Coons, 1981; Hassel, 1998; Nathan, 1989; Young and Clinchy, 1992).

The liberation model indicates that poor and minority children are more likely to be subjected to inferior schools than are non-poor and non-minority children. More
affluent upper and middle-class families and students exercise the options of choice of better schools, in better neighborhoods that they can afford and elect to live in. Conversely, less affluent poor and minority children tend to enroll in schools restricted by where they can live. Limited incomes create barriers of societal prejudices of poverty and racial isolation (Brouillette, 1999; Farley and Frey, 1994; Jargowsky, 1996; Kozol, 1991; Orfield, 1991). The widely held belief that schools in low-income neighborhoods are not good schools contributes to the perception that the best chance for improving educational opportunities for poor children is school choice.

Kahlenberg (2001) argues that racial or ethnic status is not the strongest predictor of academic achievement, but rather socioeconomic status (SES). His assertion is that when low-income students attend school with other economically disadvantaged students, the environment is detrimental for academic achievement. Substandard schools serving poor children in poor neighborhoods are not equal to middle-class students attending schools in more affluent neighborhoods. Kahlenberg recommends that the national emphasis of school choice programs should primarily focus on desegregation based on socio-economics rather than simply race or ethnicity.

**Magnet Schools**

Magnet schools are public schools K-12 that have specialized programs that are designed to attract students from across the school district. Students are eligible to enroll in a magnet school regardless of the neighborhood boundaries the district establishes to make school assignments.

High failure rate, low standardized test scores, and dependency problems with drugs and alcohol have caused parents and politicians to feel a sense of urgency about the
The state of public education (Dentzer-Wheelock, 1990; Quality Education for Minorities Project, 1990). The Quality Education network is a non-profit organization in Washington D.C. established in 1990 to improve education for minorities nationally. As a result of the increased concern for the quality of urban education, many cities developed magnet schools with specialty missions (Metz, 1986).

Magnet schools seek both to promote academic desegregation in American schools, and to enhance the quality of American education. Magnet schools such as the Bronx School of Science, Chicago’s Lane Tech, and Boston’s Latin School have been in existence since the turn of the century (Steel, Levine, 1994).

Some researchers contend that magnet schools, as a desegregation tool that forced White families to be reassigned to Black schools, significantly accelerated “White flight” (Rossell, 1983). As a consequence, school administrators, state departments of education, and government officials searched for alternatives ways to attract students and families as opposed to forcing them to attend desegregated schools. Policy makers were faced with the task of countering the strong inclination of parents, particularly White parents, not to continue sending their kids to the neighborhood school. White families who were forced to send their children to a neighborhood school as a result of a mandatory assignment, refuse to attend 50% of the time, especially if the school is 90% or higher Black (Rossell, 1983 a, 1980; Pride, 1980; Rossell and Ross, 1979; Giles et al., 1975). Whites may be reluctant to attend schools of this racial composition, and even more inclined not to enroll in a formerly predominantly Black school (Royster et al., 1979:92; Fleming et al., 1982:117; Weaver, 1979; Larson, 1980:5). As the socioeconomic and racial divide continues to widen, the expectation of the school and the
method of delivering the curriculum begins to shift. Parents of all social classes share similar values regarding child rearing, however they may have different priorities (Khon, 1976). Working-class parents tend to place an emphasis on obedience and conformity with a reliance on external control, and middle-class parents emphasize inner-control and self-direction.

Neild (2004) studied the effect of magnet schools that employed a selective enrollment policy based on the average score of the ninth-grade student enrolled in the neighborhood schools. The data suggested that the lowest performing neighborhood schools’ student body was not significantly impacted by the existence of magnet schools, because the academic achievement standards required for selective enrollment disqualified many of these students from attending the magnet school. However, the impact of magnet schools on neighborhood schools where high achieving students attended was much greater.

Saporito (2003) conducted a study to examine completed magnet school applications, in an effort to discover trends in parental preferences of diversity either racial or economic. The data suggested that White families tended to not select schools with higher percentages of minority students. Socio-economic status also appeared to deter families of a similarly higher socio-economic status to not select schools with lower socio-economic status student populations. As a consequence of this pattern of White upper socio-economic status families’ selections, the neighborhood schools became more racially and economically segregated.

Adhock and Phillips (2000) suggested that academic achievement is often correlated with student demographics to a greater extent than the actual programmatic
focus of the school. However, the academic achievement of the students attending magnet schools was better than, or at least equal to those students attending non-magnet schools. The data also revealed that when considering the students’ previous skills or IQs, there was a decrease in the satisfactory significant distinction between magnet and non-magnet student academic achievement. The research suggests that this phenomenon is caused by the fact that more capable students choose to attend magnet schools.

Charter Schools

The term charter is believed to have its origin in the 1970’s by an educator in New England by the name of Ray Budde. This concept of “charter” was to refer to contracts for teachers that would be designed to investigate and explore alternative and innovative approaches to schooling (Budde, 1996; Kolderie, 2005; Nathan, 1999). Based on this idea, former president of the American Federation of Teachers Albert Shanker suggested that this philosophy be expanded to entire schools, as opposed to individual teachers. A number of school districts around the country including Philadelphia and Minnesota adopted this concept of district charter schools. The first law to be passed on behalf of charter school creation district-wide was in Minnesota in 1991 (Nathan, 1999). There were nearly 20 states that had laws permitting the development of charter schools by 1995, and that number grew to 40 by 2003. This trend in education is clearly growing in popularity, consequently gaining support legislatively and politically. In 1994 President Bill Clinton signed The Goals 2000: Educate America Act (P.L. 103-227, 1994). The purpose of the act was “to improve learning and teaching by providing a national framework for education reform” (p.1). This act authorized resources to states and communities to help ensure there was funding designated to support efforts to help every
student meet his or her full potential. Additionally, in 1994, Congress appropriated $105 million for education, which could be designated by states for various education improvement projects, including charter schools. Support for charter schools on a federal level was demonstrated again in 1994 with the reauthorization of the Elementary and Secondary Education Act (ESEA, 1965), which provided start-up grant funds for charter schools (U.S. Department of Education, 2002). Moreover, in 1998, the federal Charter School Expansion Act of 1998 rewarded states for having strong charter school laws with additional federal funds and firmly established governmental support for charter schools (Charter School Expansion Act, 1998).

In 2001 the No Child Left Behind Act (NCLB), was signed into law and included the following provisions: (1) stronger accountability for student achievement results; (2) more freedom for states and communities to use federal funds in the manner they deemed most appropriate for students; (3) an emphasis on using research-based educational methods; and, (4) more educational choices for parents, including moving a child to a better performing school, access to supplemental educational services paid for by the district, and enrollment in charter schools (U.S. Department of Education, 2002).

Both former presidents Bill Clinton and George W. Bush, and current president Barack Obama, have publicly supported charter schools. Clinton, who called for 3,000 charter schools by 2003, and Bush, calling for $20 million dollars to support these schools, making vivid the fact that charter schools were a viable option in public education. The establishment of Race To The Top funding for public education reform by the Obama administration represents a federal governmental priority for charter school development. President Barack Obama, in June, 2009, proposed the goal of designating
in excess of three percent of the gross domestic product (GDP) to research and development, including educational reforms, effectively escalating the stakes even higher. As a result of this support by the federal government, today, there are nearly 6,000 charter schools across the nation serving 1.5 million students (National Alliance for Public Charter Schools, 2013).

Charter schools were developed to function in innovative ways, free from the traditional norm of public schools. The actual “charter” is a performance contract that details the schools’ mission, clients, assessment methods, and performance indicators. The benefits of charter schools influenced the legislature to construct laws to create choices for families in the public schools, foster innovative strategies for teaching, provide more opportunities for quality education, and increase community and parent involvement in public education. The establishment of a charter school was primarily initiated by groups consisting of parents, teachers, and community members, business people, and existing schools and districts that had the desire to convert to charter schools (Budde, 1996).

The Ohio General Assembly passed House Bill 215 in 1997 relative to the creation of community schools. The newly designated term community schools was adopted instead of the term charter schools to avoid any possible confusion with earlier private schools that were known as chartered-non-public schools (OAPCS, 2012). In recognition of the dilemma in urban education in Ohio, particularly with low income and minority students, there were specific areas that the state would designate to create these special schools. The target areas were the eight largest cites in Ohio: Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo and Youngstown (OAPCS, 2012).
Toledo was the first city to open a community school in August of 1998, and within a year, charter school enrollment increased to over 2,000 students in 14 additional schools for the school year of 1998-1999. The last city of the initial eight to open a community school in the state of Ohio was the city of Canton. By the year 2006, more than a million students were enrolled in 3,600 charter schools in over 40 states. In Ohio, the number of students enrolled in community schools during the 2005-2006 school year had grown to 71,000 in 297 charter schools (OAPCS, 2012).

In March of 2009, President Obama proposed five pillars of school reform in a speech to the Hispanic Chamber of Commerce. One of the pillars in his remarks included the concept of encouraging and promoting innovation and excellence in American schools through the expansion of charter schools. President Obama suggested that lifting caps on how many high performing charter schools are allowed in a state would be good for America (White House Office of the Press Secretary, 2009). As a result of President Obama’s call for reform, United States Secretary of Education Arne Duncan announced in November of 2009, the priorities for states to compete for the 4.3 billion dollars in “Race to the Top” funds. States with restrictions and caps on charter school creation and enrollment will be at a disadvantage for the race to the top funding (U.S. Department of Education, 2009 b). Rotherham (2007) proposed an idea of “Smart Charter School Caps” by allowing quality-sensitive growth among charter schools. This idea of smart caps shifted the emphasis from simply allowing more charter schools to a focus on the quality of charter schools, and encouraged the good charter schools to expand.

With the emphasis on expansion of charter schools, it has become critically important to ensure that a high quality charter school authorizer and sponsor are in place
to provide technical assistance and oversight of the performance and operation of charter schools (Dillon, 2010). Problems of low student achievement, abuse, and fraud multiply in the absence of quality authorizing. Therefore, charter schooling as a reform effort has a much greater chance of success with quality authorizers (Mead & Rotherham, 2007; Palmer & Gau, 2005).

Ohio has taken steps to improve the quality of charter school authorizers by imposing new requirements on organizations and institutions that desire to be authorizers. The state of Ohio charter school regulations have expanded to allow universities and non-profits to authorize charter schools, as well as the State Board of Education and the local school districts. However, this new freedom in authorizing has resulted in unintended consequences of inconsistency in the quality of charter schools causing legislative action to cap the number of new schools opening under the Ohio’s New Charter School Law (Palmer, Terrell, Hassel, & Svahn, 2006; Russo, 2005; Zimmer et al, 2009).

**Private School Vouchers**

A high quality education for all U.S. children is a stated national value but not an observable behavior (Haberman, 2005). Education is the third highest program sector that tax dollars are spent on next to the military and healthcare. Attaining a high quality education for all students is a value held by most Americans. But most Americans also believe that the funds needed to fix public education for poor children are already invested in the schools but not being used wisely (Haberman, 2005). The revelation of the 2000 census that 80% of American households do not have children in public schools, tends to support politicians promises to improve education without raising taxes.
Haberman (2005) contends that 14 million diverse children in poverty are being mis-educated, and seven million of those children disproportionately represent children of color who attend the 120 largest school districts.

There are two studies in the free school voucher literature that have examined the association between high school graduation and participating in a voucher program. An experimental evaluation of the federal voucher program in Washington, D.C. concluded that the likelihood of graduation from high school was increased by 21% as a result of participating in a voucher program (Wolf et al., 2013). Additionally, an observational study of some select high schools in Milwaukee reported that students who participated in the voucher program graduated at a rate that was 12% higher than the system-wide graduation rate per Milwaukee’s public schools (Warren, 2011).

The lack of financial resources was considered a barrier for poor students. Consequently, community groups such as The Anne E. Casey Foundation establish endowments and foundations designed to provide direct financial support for families to pursue better educational opportunities. The mission of the Anne E. Casey Foundation is to promote the growth of public policies, designed to meet the needs of vulnerable children and families through grants that encourage and support innovative ways to help them. However, Jim Casey started a messenger service in 1907 that is now known as United Parcel Service (UPS) Mr. Jim Casey never had children of his own but felt strongly about what kids needed emotionally, materially and ethically from their parents. After his death in 1983, he left a substantial endowment to the foundation for the purpose of helping the most vulnerable children and families with resources.
Achievement in Arts

To justify the arts as a curriculum necessity, arts educators must develop a position of advocacy for arts in the curriculum based on the inherent value of the arts, even though there are secondary benefits (Hetland & Winner, 2001). Many arts educators have argued that the arts can help students achieve in other academic subjects. They claim that the arts can help students to become literate, develop skills in calculating, and enrich learning and understanding in science (Hetland & Winner, 2001). Hetland and Winner (2001) suggests that the strategy of keeping arts in the schools as a way to support the more appreciated academic areas may become a dangerous line of reasoning. If the rationale for the arts in school is simply that they will help to improve academic achievement, and that improvement does not occur or is less than expected, the arts may become vulnerable to budget cuts (Hetland & Winner, 2001). According to Hetland and Winner (2001), the arts must be justified by the rationale; that what the arts teach, no other subject can teach, resisting the contention that the arts wholly or even primarily exist to support other academic content areas.

Researchers conducted the first comprehensive and quantitative study “Reviewing Education and the Arts Project” (REAP), of what previous research had suggested relative to academic outcomes and art education. REAP included all studies from 1950 to 1999 that looked into the concept of arts leading to academic improvement. As a result, 188 reports were uncovered that investigated the relationship between one or more arts areas to one or more academic areas.

The findings of the REAP meta-analysis revealed that there were three areas where reliable causal links were found. They were: Listening to Music and Spatial-
Temporal Reasoning, Learning to Play Music and Spatial Reasoning, and Classroom Drama and Verbal Skills. First, 26 reports found that there was a medium-sized causative relationship between listening to music and a temporary improvement in spatial-temporal reasoning (Hetland & Winner, 2001). Although a clear link was found, there were numerous inconsistencies as to the degree of effect these relationships shared. Additionally, there was no real data as to why the link existed. Further, educators may tend to discount the importance of the found link, because it is only temporary, and inconsistently revealed. As for the second area, REAP located six reports that indicated a small causal relationship between math and music training. Third, a small to medium-sized causal relationship was found between dance and non-verbal reasoning.

There were, however, five areas in the REAP study where no reliable causal links were found. In the category of “Arts-rich education and verbal and Mathematics scores/grades”, 31 reports suggested only a small to medium correlation relative to studying the arts and academic achievement. Four reports inferred a small to medium sized relationship between learning to play music and reading, visual arts and reading, and dance and reading. This REAP study establishes that there is a relationship between the arts and academic achievement. Similarly, the relationship between academic performance on the OGT and the on-time graduation rate in the present study, tough not a casual inquiry, indicated there is clear evidence that students in the arts magnet school have higher OGT scores and tend to graduate on time.

In interdisciplinary curricula where different disciplines are paired, conflicts may arise in their ways of knowing (Applebee, Burroughs & Stevens, 2000; Weinberg & Grossman, 2000). In such correlated courses where content areas are paired, one
discipline often dominates the approach. For example, an interrelated Social Studies and music history course may use music theory ways of knowing as the basis for the co-curricular conversations, possibly de-emphasizing the Social Studies aspects of historical issues related to the social climate of a given period of time. Discussions of Marvin Gaye’s music and its relevance to social issues at the time of its writing may become dominated by dialogue about the harmonic structure of Gaye’s compositions, instead of investigating the social issues prevalent when the pieces were written. This, of course, is more suited for a Social Studies way of knowing. Conflicts in an English and Social Studies curriculum pairing may also occur. For example, *Huckleberry Finn* may be discussed as an historical text with illustrations of historical attitudes toward slavery, rather than simply as a literary artifact (Weinberg & Grossman, 2000).

An early example of a successful arts infused project was the Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT). The objective of the Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT) project was to rebuild educational programs in schools to equally value arts and other content areas. Through a comprehensive teacher training and in-service program that includes outside organizations and artists, a high artistic quality program would be developed. By inculcating sound principles of arts integration in all aspects of the curriculum, the quality and quantity of aesthetic education would improve (Lathrop & Boyle, 1972).

The project was initiated by four professional arts organizations-The National Arts Education Association, Music Educators National Conference, the dance division of the American Association for Health, Physical Education and Recreation, and the
American Theater Association. There were five school districts selected to participate in this project (Columbus City Schools in Ohio, Eugene Public Schools in Oregon, Glendale Unified District in California, the School District of Philadelphia in Pennsylvania, and the combined Troy City, Pike County & Bullock County Schools in Alabama).

Each of the five sites had different characteristics and student demographics. Two elementary schools were selected to participate in Columbus. The selection of the participating schools was based on the attitudes and capabilities of the teachers and principals. The students in one of the elementary schools was predominantly Black and of low socioeconomic status, and the students in the other school were more diverse and middle income. The classrooms were self-contained classes that included an arts team that would come to the classrooms and work with the students and the teachers.

There was one elementary school that participated in the Eugene project. The student population was predominantly middle class. The primary difference between the Eugene project in Oregon and the Columbus project was the reorganization of 18 self-contained classrooms into four teaching units (three teaching units and an arts unit) (Lathrop & Boyle, 1972).

All of the elementary schools in Glendale participated in the project. Of the 23 elementary schools in the district, six schools were designated as pilot schools that had “arts resource trainees” in music, visual arts, drama and dance. This strategy was utilized to mitigate the funding constraints in the district, by training all elementary teachers to infuse the arts in the curriculum with or without an arts specialist in the building.

The Philadelphia project was unique because it was a middle school and a magnet school. The school served students in grades five through nine and then later grades six.
through eighth. Also, the school attracted a diverse student population both ethnically and socioeconomically. The school was organized in three academic teams and a unified arts team. The unified arts team included visual arts (visual, home, and industrial arts) and performing arts (music, dance, and drama) (Lathrop & Boyle, 1972).

The Troy project ambitiously and uniquely attempted to combine three entire independent school districts representative of some of the poorest rural counties in the state of Alabama. Infusion of the arts into other content areas was the primary focus of this project, with the intended outcome of producing curriculum packages that would be used by all three of the school systems (Lathrop & Boyle, 1972).

An important aspect of the IMPACT model was the formative and autonomous nature of the implementation. The project could evolve and adjust to the specific nuance of the schools while continually making efforts to align with the goal of infusing the arts in the curriculum. Relative to the current study, the IMPACT model was the template in which the curricular components for arts magnet schools were developed.

Wright (2007) conducted a study of two magnet schools in rural Tennessee whose students had failed to meet adequate yearly progress (AYP) quotas. The study was designed to determine if an arts integrated curriculum would have a significant effect upon the Language Arts and Mathematics scores of the Tennessee Comprehensive Assessment Program (TCAP) for fifth and sixth grade African-American male students there. Wright’s study was to determine if an arts integrated curriculum significantly improved 5th and 6th grade African American males’ performance on the TCAP achievement tests in Math and Language Arts by comparing the 2004-2005 and 2005-2006 TCAP scores of an arts magnet school (Magnet I), and a Math, Science and
Technology magnet school (Magnet II). Students who attended Magnet II scored significantly higher in math, as well as, the fifth grade students enrolled in Magnet II scored significantly higher in language arts than the Magnet I school students. However, sixth grade students enrolled in Magnet I scored higher on the TCAP language arts test.

Finnan-Jones (2007) conducted a study investigating the mathematical achievement of fourth and fifth grade English language learners who received visual arts instruction with those who did not, and then described ways in which art education activities supported and developed mathematical learning. According to (Finnan-Jones, 2007), students who are new immigrants to the U. S. have low levels of English proficiency and low socioeconomic status. Results of this study report that the students who participated in the arts program made significantly greater gains than those students who did not take part. In analyzing observational data from the arts instruction classroom, students were employing cross-curricular ways of knowing by applying mathematical concepts in conjunction with literacy concepts. Students were given the opportunity to learn and apply mathematical concepts through an art activity, resulting in significant gains for the students who participated in the art activity, as opposed to those who did not participate. Findings from this study support the view that standardized test scores are increased in Mathematics when students are concurrently engaged in art education.

Creativity integrated into an exam-driven curriculum has proven to be useful by building and maintaining positive relationships, increasing academic motivation, and nurturing a climate of respect (Boldt & Brooks, 2006). The University Charter School for Waco Methodist Children’s Home is a charter school serving at-risk students in a residential program. The after-school program integrate strategies of utilizing creativity
in the arts to motivate academic achievement along with building a sense of community (Boldt & Brooks, 2006). To accomplish this mission, the school employed the Circle of Courage model philosophy focusing on the universal need all children have for belonging, mastery, independence, and generosity (Boldt & Brooks, 2006). Creative activities integrated with the academic subject matter supported the goal of higher achievement standards. Consequently, for the first time in United States history, eighth grade students from the Methodist Children’s Home who took the Texas state assessment scored over 85% compared with the state performance of at-risk students of 70%. Boldt and Brooks contend that this academic gain is due in part to the creative strategies employed in the U. S. history curriculum. Boldt and Brooks reported that the same high passage rate occurred in reading due to creative instructional techniques as well.

Jones (2004) reported that on the Academic Performance Index scores at Moffett Elementary, a large inner-city school in Metropolitan Los Angeles, there were significant increases. The student demographics of Moffett reveal that 96% of the Moffett Elementary School’s students received free and reduced lunch, and 85% of the students’ parents spoke only Spanish. Academically, Moffett’s student achievement performance data consistently fell below the 25th quartile on standardized assessment measures, and in 1999, was designated as an underperforming school by the State of California. As an intervention strategy, the Leonard Bernstein Center Artful Learning school reform model (LBC) was utilized as a comprehensive school program designed to specifically align with the classroom instruction and curricular components at Moffett Elementary (Jones, 2004). The curriculum and instruction was developed and delivered through the LBC Artful Learning frames of experience, inquire, create, and reflect. Through this
engagement in the study of Mathematics, the Sciences, and English language arts integrated with a chosen artistic masterwork followed by inquiry and questioning, original creations, and reflection, Moffett’s Academic Performance Index increased by 30 points in 2001 (Jones, 2004). Additionally, Moffett’s API scores increased the next two years. The following year in 2002, the API increased 40 points, and in 2003, the API increased another 77 points, which was 64 points above the state target for student improvement (Jones, 2004).

According to Bitz (2004), the Comic Book Project, an arts-based literacy initiative in New York City during October and December of 2002, did help the students meet the four New York State Learning Standards (SLS) for English Language Arts. The goal of the after-school project was founded on a unique paradox: learning is mandatory but attendance is not (Bitz, 2004). The SLS indicated that students would read, write, listen, and speak for information and understanding, literary response and expression, critical analysis and evaluation, and social interaction. Relative to standard 1 (information and understanding), students learned to relate the creation of a comic book to history and current events, learned new vocabulary inherent to comic books, and researched information and demonstrated understanding through the comic book format (Bitz, 2004). Regarding standard two (literary response and expression), students wrote their stories and created art as a means of literary response and expression. Standard three (critical analysis and evaluation) students were critical and reflective of their work and made revisions after analyzing and evaluating their work. Lastly, standard four (social interaction) caused the students to work together while negotiating their skill set in relation to another group member.
McCarthy (1980) investigated the effects of individualized instruction on achievement and dropout rate for fifth and sixth grade instrumental music students in an urban music program. The school was located in a northern industrial city where the median income at that time was $10,000. The community was 88% Caucasian and 11.3% African-American. The city’s school system enrolled over 16,000 students. The two instructional methods used were ensemble instruction and individual instruction. Ensemble instruction resembled a traditional model where students would enter the classroom, be seated in a semicircle facing the teacher and begin assembling their instruments. The students would warm up on their instruments until the teacher began the tuning process. Class time was primarily spent playing and discussing teacher-selected exercises in groups and in similar instrumental pairs. This instructional method also allowed for question and answer opportunities, as well as listening and critical skill development of the musical performances and exercises. The individualized instructional method was based on the premise that the teaching should occur on a one-to-one basis, encouraging students to practice on their own between the individualized instruction provided by the teacher. To ensure that the instruction was tutorial in nature, teachers were instructed to respond to students only if they formally requested help. Additionally, students were required to ask for permission to move forward in the music book. The study isolates two measures of music reading and the dropout rate of beginning instrumental music students in fifth and sixth grade. Assessment instruments utilized were the *Music Achievement Test (MAT)* that measured the students’ cognitive music reading ability, and the *Watkins-Farnum Performance Achievement* scale which measured the students’ sight reading ability. The students Metropolitan Achievement
Test (Metro) scores in reading were used to determine the scholastic relationships. The results of the study showed that students with above-average scores in reading achievement scored significantly higher in sight-reading, in the individual instruction setting than those in the ensemble setting.

Albert (2006) examined various strategies used to recruit and retain students in instrumental music programs in low socioeconomic districts. The criteria for participating in the study included two requirements: 50% or more of the students’ district-wide must be eligible for free and reduced lunch, and at least 25% of the schools’ population must consistently participate in instrumental music. The research questions included: What strategies do teachers employ to recruit students? What strategies do teachers employ to retain students? Which strategies are suggested for teachers in similar low SES districts? Regarding recruiting students, the teachers employed the concept of exposure to the band program. This included “instrument petting zoos,” designed for elementary students to touch and hear the instruments, transition day activities for incoming sixth graders to select programs to be involved in, and also scheduling performances for schools to hear the band play. In addition, teachers identified the concept of “availability of culturally-relevant ensembles.” The belief was that if the ensemble played music that was culturally relevant, for example in a marching band style of the Historic Black Colleges and Universities (HBCU) tradition, it would generate interest and excitement. Based on the second research question, the teachers believed that teacher personality, philosophical values, and utilizing a proactive process, were key to student retention. Also, teacher personalities played a significant role in the retention of students, because students elect to stay in the music class because they like the teacher.
and decide to stay in music classes on a volunteer basis. Establishing an environment where students were increasingly engaged was achieved by creating a “student judiciary system” that included incentives, opportunities to create marching band arrangements, and student-led rehearsals and sectionals, all planned and implemented by the students. Lastly, a proactive approach to creating parental involvement was vital to retention. “Parents must feel as if they are equal partners with the instrumental music for retention to occur” (p.64).

Klinedinst (1991), conducted a study, in which the goal was to identify predictors of achievement and retention of elementary students in a fifth grade instrumental music program by examining 11 variables: music aptitude, scholastic ability, math achievement, general music teacher rating, attitude toward music, self-concept in music, music background, motivation to achieve in music, socioeconomic status, and instrumental adaptation assessment. Music aptitude was measured with the Measures of Music Audition (Gordon, 1982); scholastic achievement was measured with the Otis-Lennon School Ability Test form R (Otis & Lennon, 1979); and academic achievement was measured by the Stanford Achievement Test, Intermediate 1, form E (Gardner, Rudman, Karlson & Merwin, 1982). A researcher-designed Likert-type scale was developed for the classroom music teacher to provide ratings for potential success in instrumental music. The students’ attitude toward music was assessed by the Attitudes toward Music Scale (Hedden, 1982), and The Self-Concept in Music Scale (Svengalis, 1978) provided data as to how students viewed themselves musically. The assessment instrument used to measure the music activity in the students’ homes was the Music Background Inventory (Svengalis, 1978). The variable motivation for music was measured through an
Achievement Motivation Instrument by developed by Asonus (1987). Occupation and education were used as predictors for designating socioeconomic status utilizing the Two-factor Index for Social Position (Hollinshead, 1965). Physical characteristics such as wrist flexibility, lip size, hand and finger size, size of lip aperture, jaw alignment, and ability to buzz, were used as criteria for the researcher to develop a criterion-reference, additive rating scale based on the writings of House (1965) and Otto (1971). Student achievement was measured by a series of music performance evaluation etudes composed by the researcher, aligned with the instructional materials regarding rhythmic and tonal content. Lastly, the music teacher could rate the music students’ achievement based on a five-point summative scale designed by the researcher. The study concluded that performance achievement is predicted by scholastic ability and achievement tests during the first year of instruction, and there is a significant correlation between academic achievement and retention; however, other variables, including self-concept and family socioeconomic status, play an important role. In addition, physical characteristics were not a predictor for success on a musical instrument. Finally, this study concluded that it is much more likely to predict a student staying in a music program than it is to predict their dropping out.

Herron, and Siebenalar, (2007) conducted a research study to examine the intersection of vocal music relative to auditory processing and vocal production. The goal was to inform the practice of language arts and vocal music teachers as they endeavor to enhance a child’s auditory processing and quality of speech abilities. The National Research Council (Snow, Burns and Griffin, 1998) and the National Reading Panel (2000) analyzed children’s literacy development research, and identified five areas:
phonemic awareness, phonics, fluency, vocabulary, and text comprehension. The National Reading Panel defined the need for awareness as the ability to hear and manipulate the smallest units of language called phonemics (Adams, 1990). For example, awareness is decoding the alphabet into phonemic and then blending or segmenting the phonemics into words. The concept of blending phonemics is applied to singing when a singer learns to suspend the breath on vowel sounds, consonants utilizing rhythms, pitches and dynamics. “Auditory processing ‘listening’ is the delicate ability to filter, analyze, and respond to sounds.” (Jenson, 2001, P.43). Fluency, according to Put Reading First (Armbruster and Osborn, 2003 P.19), is the ability to read text effortlessly and expressively, quickly, and accurately. In addition, fluency includes prosody (the ability to put words together in natural speech rhythm intonation and flow). Children first learn language from their first caregivers as they model language for them (Papovsek and Papovsek, 1981). This study provided information relative to the curricular pairing between vocal music and language arts in a school.

Research suggests that minority participation and retention in a music program is impacted by a racial disconnect. There is a growing concern that more often than not, the demographics of the public school system fails to match the demographics of the performing groups. Public school music ensembles enroll predominantly White students (Stewart, 1991). In addition, the demographics of the teachers in public schools are mostly White and do not match the ethnicity of the student population (Gardner, 2006; Henke; Choy, Chen, Geis, and Alt, 1993). As reported in published studies in the 1990’s, participation of minority students in public school music programs had been researched for several years (Stewart, 1991; Watts, Doane, and Fekete, 1994). More recently,
research indicated that 21% of American high school seniors participated in band, choir, and/or orchestra in 2004. Sixty-one percent of the students were female, 65.7% were White, 15.2% were Black, 10.2% were Hispanic, 4.3% were Asian, 0.7% were American Indian/Alaska Native, and 0.2% were Native Hawaiian/Pacific Islander, suggesting that as students matriculate through high school they tend to drop out of music classes (Elpus, 2011).

There are two factors in the research literature that are consistently considered strong predictors of beginning instrumental music achievement and retention: music aptitude and music ability. Music aptitude is a result of genetic endowment, and music ability refers to the ability to do something in music such as play a scale on an instrument. Some researchers however contend that aptitude is most important in beginning instrumental music students (Brokaw, 1983; Froseth, 1971; Gordon, 1967, 1986; Schleuter, 1978).

Brown & Steinberg (1991) conducted a study that focused on four areas of non-instructional influences on a high school student’s engagement and achievement patterns. Family, peer interaction, part-time employment, and school-sponsored extracurricular activities were the identified focus areas studied. The aim of the study was to examine the processes of influence, as opposed to the structural features of the areas of focus. According to this research, a structural feature of studying the family is an examination of the make-up of the family, e.g., a two-parent family. The investigation of the process of influence would include how parenting strategies impact academic engagement and achievement. The researcher was interested in how the influences interacted, and if the areas of focus were regarded as independent, competing, or complementary (Brown,
The technique of observing the students in extracurricular activities was employed to identify the influence of these activities, and how it impacts their engagement in school. This process was called school site lever and was designed to pull kids into more academic and engaging environments. Unlike studies that hold the common belief that parents and peers have opposing influences on adolescents, i.e., parents encouraging academic achievement and good social behavior, and peers representing a distraction and antisocial behavior (Coleman, 1961), this study suggested that the peer and parental influence is more complementary than oppositional (Brown, 1991). Parental actions such as monitoring involvement in school and parenting styles impacted student achievement more than the parents’ values and expectations. Peer influence was the most vivid when friends provided encouragement to finish school, and to value academic achievement. Encouragement of achievement was strong among peer groups of the “brain crowd” and less influential among the “druggie” crowd. The suggestion that a peer crowd can have a positive impact relative to the importance of school was an important element of these findings. The study indicated that students with the highest grades, in fact did experience a complementary influence of parents and peers. Part-time employment tended to distract the students, however, extracurricular school sponsored activities enhanced the students’ academic school performance.

McLelland (2005) designed a study that investigated 2001-2002 and 2003-2004 standardized testing data of 356 fifth-grade students in the state of Delaware. The researcher investigated student participation in instrumental music and whether there was a significant difference in the achievement scores of those who participated and those who did not. The researcher conducted a causal-comparative study to examine reading
and mathematics scores of third-grade students as a covariate control measure to determine existing differences prior to participating in instrumental music programs. As a result, the findings indicated a statistically significant difference between the math and reading achievement scores of the instrumental music participants and those students who were non-participants in instrumental music. The participants had a mean score 7.9191 points higher in reading and 8.590 points higher in their math scores.

McLelland (2005) examined the relationship between music and academic achievement. The National Center for Educational Statistics compiled responses and information about 18,000 high school sophomores. The study was considered the first follow-up to the National Education Longitudinal Study of 1988; the purpose was to facilitate the investigation of the American 10th Graders’ Social and Academic Life. Music activities such as band, orchestra, and choir were among the hundreds of items of information catered. In order to gather a perspective about the relationship between music participants’ and non-music participants’, and academic achievement, the two groups were examined. Twenty-two point three percent of students classified themselves as participants in school-based music activities. The total gender demographic of the group was relatively balanced: 49.6%, male and 50.4%, female. However, of the music participants, 63.2% were female, and 36.8% were male. The racial demographics were reflective of the overall sample: 0.8 percent Native American, 76.1% White, 9.2 percent African American, and 7.7 percent Hispanic. Conversely, White students were over-represented by four percentage points in music activities and participation, and Hispanic students were under-represented by about four percent as music participants. Students of the lowest socioeconomic level were under-represented in the music curriculum while the
highest socioeconomic status students exceeded the norm by four percent. The achievement of the students was measured in two ways: first by asking students to identify if they had received honors such as honor roll, recognition for good grades, or any type of academic award. The music participants received a disproportionate share of the awards compared to the other groups. In addition, achievement was measured by the actual student’s grades in Math, English, History, and Science from the beginning of the ninth grade. The comparison of students getting A’s and B’s was about the same; however, math scores among music participants and non-music participants were significantly different by six percent. The results of this research study imply that students who are participants in a school-based music activity are demonstrating higher levels of academic achievement.

Young (1971) studied the power of three types of standardized tests to predict success in an elementary instrumental music program. The three tests used were the Music Aptitude Profile (MAP), the Lorge-Thorndike Test, and the Iowa Tests of Basic Skills. The three criterion tests were given to 50 students who had received music lessons for about two months. Criterion Test I was a tape-recorded test consisting of two parts: a tonal concepts test and a rhythmic test. The test was divided into three subtests: aural perception, music reading, and notational understanding. Criterion Test II consisted of three parts: an aural recognition that was a tape-recorded test of music instruments, and two written multiple choice tests of musical terms and music symbols. Criterion Test III evaluated the students’ performance abilities on their instruments by having them: play a prepared etude, do some sight-reading, and improvise a familiar melody. Three competent judges evaluated the recorded performances, aural perception of melody and
rhythm. Music ability was measured by the MAP test and extra musical factors were associated with intellectual abilities related to reading and notating music. This study indicated that music aptitude is important in music attainment after the first year of instruction, but is not as influential as academic achievement. Students who were advanced academically tended to be more efficient in learning methods of producing sound and notation. Conversely, as students became more proficient on their instruments, the development of musical expression and interpretation more closely associated with music aptitude increasingly becomes more relative. The study concluded that long-term musical achievement is predicted by musical aptitude scores as opposed to academic achievement that is more valid in predicting short-term musical achievement after the first or second year.

Based on the cited literature in this chapter, the research supports the premise that that choosing an arts magnet school makes a difference in academic achievement and reducing the dropout rate despite risk factors that urban children face.
CHAPTER 3: METHODOLOGY

The purpose of the study was to ascertain, as one indicator the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students and the 2011 on-time graduation rate. In order to make these comparisons, the following research questions were used to guide the investigation.

1. To what extent does the 2009 OGT passage rate differ between students enrolled in the arts magnet high schools, the six target districts and the state?

2. To what extent does the on-time graduation rate differ between students enrolled in arts magnet high schools and non-arts magnet high schools in the 6 target districts and the state?

3. Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the five content areas of the OGT?
4. Do students enrolled in the six arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?

5. To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

**Methodology**

The study compared the publicly available 2009 OGT test results for tenth-grade arts magnet high school students in six large Ohio urban districts with the school’s district, and the state of Ohio. Additionally, the study examined the 2011 on-time graduation rate for each performing arts magnet school, each performing arts magnet school’s district, and the state of Ohio. Presumably, 2009 sophomore students would be on-time graduates in 2011. The large-district arts magnet high schools are located in six of Ohio’s largest schools districts: Akron, Canton, Cincinnati, Cleveland, Columbus, and Dayton. Only publicly available data sources from the Ohio Department of Education website (Ohio Department of Education, 2013), the six performing arts schools, and their district websites were used for the study. The study was limited to the 2009 sophomore OGT publicly available school data report cards, the school mission statements, and the publicly available disaggregated school enrollment information on the state, the district and the performing arts magnet schools’ publicly available websites.

Through an analysis of academic achievement data measured by OGT test results from the arts magnet high schools, the state, and host districts for 2008-2009, and the 2007-2008 ninth grade cohort on-time graduation rate, the study compared and described
the differences between each arts magnet high school and its host district’s report card, and the differences between the performing arts magnet schools and state reports cards (Ohio Department of Education, 2013).

To address the research questions, the study examined publicly available school cohort report card data reports from the ODE and school district websites. The data for the study is limited to the 2008-2009 sophomore OGT test takers report card data, and ends with the 2010-2011 cohort report, presumably when the 2007-2008 freshman class and the 2008-2009 OGT test-takers would graduate. To approximate a cohort longitudinal examination, the study is limited to the aggregate data reports for each academic year. Therefore the study was unable to control for transient students who moved in or out of the district, state, or the arts magnet high schools. To examine and compare transient students who are no longer in the arts magnet high schools, host districts and the state of Ohio was beyond the scope of this study.

To address the research questions concerning the passage rate on the OGT, the descriptive study compared the publicly available 2008-2009 tenth-grade Ohio Graduation Test (OGT) results for students in the state of Ohio, for students in six of Ohio’s largest urban school districts, and the six district’s arts magnet high schools. Additionally, the study compared the tenth-grade school cohorts’ 2011 on-time graduation rate. The publicly available OGT and on-time graduation rate data were available as aggregate and disaggregated data on the Ohio Department of Education’s publicly available website (Ohio Department of Education, 2013). Ohio Graduation Test data appeared as publicly available report cards for the state, the host school district, and
individual school buildings. The study did not include individually identifying student information or other data resources that were not publicly available.

Cluster samples of Ohio’s tenth-grade student population was limited to tenth-grade students enrolled in six of Ohio’s large school districts (Akron Canton, Cincinnati, Cleveland, Columbus, and Dayton), and the arts magnet high school in each of the cities. The cluster sampling approach, “a naturally occurring, mixed aggregate of elements of the population” (Chambliss and Schutt, 2010; pg. 117), was deemed appropriate due to the study’s use of the composite data reports from Ohio’s publicly available school report card data. Additional information concerning the school and its local district was drawn from the local school district’s website and the arts magnet high school’s website. The researcher acknowledged the study’s inability to control for transient students who moved in or out of an arts magnet high school, a host district, or the state of Ohio.

The purpose of the study was to ascertain, as one indicator, the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and on-time graduation rate. The study’s dependent variables were the 2008-2009 OGT composite scores and the 2011 on-time graduation rate results. The independent variable is school choice enrollment. Data for the Ohio Department Education website are supplied by the Education Management Information System (EMIS) which provides achievement and demographic data for the state, its local school districts, and individual schools. EMIS provides validity considerations at the following link on the ODE website:

http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=1297&ContentID=89632&Content=129274.
The Ohio Graduation Test

The graduating class of 1994 was the first class required to take and pass the Ninth Grade Proficiency Test. The test was replaced with the Ohio Graduation Test in March of 2005. The Ohio Graduation Test was composed of the same five academic content areas of the ninth grade proficiency test with the exception of the Citizen section, which was replaced with the Social Studies section on the OGT. To date, all public and private school students in Ohio are required to take, and pass the OGT as a requirement for graduation from high school. Students with special needs are excluded from the OGT and may instead receive accommodations including tests created with large print, tests created in different languages, and test-readers for students who require interpreters. In addition, alternative assessments are available for students with significant disabilities (Ohio Department of Education, 2013).

Students are given the OGT for the first time in the spring of their sophomore year. A student has the opportunity to retake any section(s) of the OGT they have not passed, through a series of additional test administrations during their remaining time in high school. The OGT is administered in the fall (October), the spring (March), and the summer (June). This test administration schedule will afford the typical student 7 opportunities to take the test before their scheduled on-time graduation. In the event a student has failed to achieve a raw score of 400 on one section of the OGT, and if the student is within 10 points of achieving a passing score, that student may be eligible for an alternative pathway to graduation. However, a student must meet seven specific requirements to take advantage of this option for graduation. The specific requirements include 1) the student scoring a 390 or better in the previously failed content area test, 2)
a 97% attendance rate for each of their four years of high school, 3) no expulsions in their discipline record, 4) a 2.5 cumulative grade point average in the content area of the failed test area, 5) a 97% mandatory attendance rate in an intervention program, 6) meet all other graduation requirements including 7) a letter of recommendation to graduate from the principal and that specific content area teacher (Ohio Department of Education, 2013).

Students in Ohio are required to take the OGT. Approximately 144,839 tenth graders both public school and non-public school students were administered the OGT in March of 2009, as shown in Table 1:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Public</th>
<th>Non-Public</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>134,003</td>
<td>13,210</td>
<td>147,213</td>
</tr>
<tr>
<td>Math</td>
<td>134,994</td>
<td>13,221</td>
<td>148,215</td>
</tr>
<tr>
<td>Writing</td>
<td>133,949</td>
<td>13,212</td>
<td>147,161</td>
</tr>
<tr>
<td>Science</td>
<td>135,195</td>
<td>13,212</td>
<td>148,407</td>
</tr>
<tr>
<td>Social Studies</td>
<td>134,391</td>
<td>13,173</td>
<td>147,564</td>
</tr>
<tr>
<td>All 5 Tests</td>
<td>131,812</td>
<td>12,927</td>
<td>144,839</td>
</tr>
</tbody>
</table>

**Definition:**

- Graduation rate: “The Ohio Department of Education (ODE) defines the graduation rate as the percentage of students who entered high school who received a regular diploma or honors diploma during the reporting year, including students who graduated the summer after the 12th grade and
students who completed coursework prior to eventually passing all five sections of the Ohio Graduation Test” (Ohio Department of Education, 2013).

**Explanations and Caveats:**

- “The graduation rate formula used by ODE is consistent with National Center for Education Statistics recommendations for calculating graduation rate. The formula is not affected by retention” (Ohio Department of Education, 2013).

- A student who takes more than four years to graduate does not negatively affect a district’s graduation rate because that student would be counted with the next class. The graduation rate is affected when a student either graduates or drops out. A student is counted as a graduate in the year that he or she achieves a high school diploma” (Ohio Department of Education, 2013).

- The graduation rate estimates a true cohort rate (i.e. one based on following individual students over time), but does not exactly replicate any student data because state law does not allow for the collection of student-level data by ODE (Ohio Department of Education, 2013).

For the purpose of this study, the OGT testing data relative to public schools in each of the 5 content areas was the focus of the examination. Non-public school data is
reported in the overall total of tenth graders who took the OGT in March of 2009, however, the report card data that is central to this research study represents the public school achievement scores in Reading, Math, Writing, Science and Social Studies.

**EMIS**

According to the Ohio Department of Education (ODE) website, the Education Management Information System (EMIS) is a statewide data collection system for Ohio’s primary and secondary education, including demographic, attendance, course information, financial and test results. The ODE publishes an EMIS manual that includes data definitions, requirements, procedures for reporting and transferring data to the department. There are seven sections of the manual. The general information section includes an EMIS overview description and general data characteristics section. The student records section contains 18 sub-sections that include record-reporting information on processes relative to demographics, race, gifted education and student discipline. The third section includes staff demographics, employment records, and reporting summer employment separation records. Sections four through seven represent descriptions of course records, district/building records, financial records, and five-year forecast records. Education Management Information System (EMIS) is the data reporting process that the state of Ohio employs to generate the Report Card data that was utilized for this study.

The Ohio Department of Education, through the Education Management Information System (EMIS), provides annual aggregate data reports for Ohio, its school districts, and individual schools. The reports included OGT composite scores, school cohort graduate rate, on-time graduate rate, attendance rate, and Annual Yearly Progress reports for Ohio’s public schools, the school districts, and individual schools. The
publicly available reports did not include any personal identifying information and therefore, there were no potential study risks to individuals, the school districts, or schools. All of the data reports used in this study were available through the Ohio Department of Education public website. The study was limited to the information available through the school, district and state publicly available website and the study did not seek any personal identifying information from the state department of education, any of the school districts, or any of the arts magnet high schools. The study’s examination, comparisons analysis, and written and publicly presented reports was limited to the publicly available data reports.

**ODE Materials**

The data sources used for this study were retrieved through the Ohio Department of Education website “State/Local Report Card” page. From the State/Local Report Card page, the researcher accessed the ODE Warehouse Reports to examine archived Report Card data relative to the state, district and building level for the school year 2008-2009. Navigating from the ODE Data Reports page, the researcher gained access to the Interactive Local Report Card (ILRC) Power User Reports page. The Ohio Department of Education defines an ILCR as an interactive tool developed for parents, educators, lawmakers, community members and researchers to provide current and historical Local Report Card data. This tool was used to locate information about a specific school or district such as proficiency test results, graduation rate, financial data and demographics. The researcher selected the data folder entitled “Test Results”. There were multiple options for data reports including test results by building, district, county, state (percentage of students that scored proficient or better by test grade by school, county,
district, regional groups of counties). Additionally, the state, district and building Report Card data was utilized for the 2008-2009 school year to examine the disaggregated test data that reports passage rate in percentages in the five content areas (Reading, Mathematics, Writing, Science, and Social Studies). The state, the district and building Report Cards also present demographic, socioeconomic, and graduation rate data in a disaggregate format appropriate to make comparisons and examinations for the purpose of this study.

The Sample

The sample consisted of urban students in Ohio who took the OGT in March of 2009, and attended an arts magnet school in one of the six school districts in Ohio who were considered a large urban district. The districts were identified based on the criteria that the district had a school choice option for an arts magnet high school. Out of the eight large urban districts in Ohio, the six districts that were identified as having an arts magnet high school were Akron Public, Canton City, Cleveland Metropolitan School District, Cincinnati Public, Columbus City Schools, and the Dayton City School District.

Akron

In Akron, the total number of students tested in all five parts of the OGT was 1656. The number of students tested in reading were 1688, Mathematics 1718, Writing 1699, Science 1725, and in Social Studies 11704 students were tested.

Firestone High School in the Akron Public School System reported that 87.4% of their students achieved a passing score on the Reading section of the 2009 OGT. The students achieved an 85.5% passing rate in Mathematics. On the writing section of the 2009 OGT, the students achieved a 91.8% passage rate. In science, the passage rate was
80.5%. Students achieved an 84.9% passage rate in Social Studies. Firestone High School had a daily average attendance of 1249 students. The ethnicity, socioeconomic status, and students with disabilities breakdown of the student population reflected 50.3% Black, non-Hispanic; 1.8 percent Asian or Pacific Islander; 1.0 percent Hispanic; 2.4 percent multi-racial; 44.3% white, non-Hispanic; 38% economically-disadvantaged; and 14.1% students with disabilities.

According to the Firestone High Schools mission statement: it’s the mission of the Firestone High School learning community to prepare their students to attain their highest degree of academic success. Firestone High School was a 9-12 high school that offers an International Baccalaureate (IB) program, a visual and performing arts program, as well as a selective enrollment process for enrollment. The course offerings were extensive in that there were advanced placement offerings in English, Science, Mathematics, Social Studies, Music and Visual Arts.

**Canton**

Canton City School District reported that the total number of students who took all five parts of the OGT was 736. Seven hundred and forty-seven students were tested in Reading; 749 students were tested in Mathematics, 748 students were test in Writing, 745 in Science; and 739 students in Social Studies.

McKinley High School, located in the Canton City School District reported 83.7 percent of the students passed the Reading section of the March 2009 OGT. The students passed the Mathematics section of a rate of 84.2%. The Writing section of the 2009 OGT was passed in the McKinley High School by 92.9%. Seventy-six point six percent of the students passed the Science section. Report Card data also reported a 79.9% passage rate
on the Social Studies section. The daily average student enrollment was 852 students. Ethnicity, socioeconomic and students with disabilities data indicated that 7.3% of the students were Black, non-Hispanic; 1.9 percent were multi-racial, 89.9% were white, non-Hispanic; 39.1% of the students were economically-disadvantaged, and 13% of the students had disabilities.

McKinley High School entered its first year of the school being divided into four small schools in the fall of 2004. The four schools would be housed in the same building and known as Active Learning Inquiry Based Valued Education (A.L.I.V.E.), Freshman Academy, the Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT), McK II, and Students and Teachers Are on the Road to Success (S.T.A.R.S.), A.L.I.V.E. is an active learning and inquiry-based education based on math, science, and physiology. Courses in this small school ranged from forensics, Health I and II, upper level Physical Education and Engineering.

The social, emotional, and academic needs of the freshmen students, was the unique focus of the Freshman Academy. Developing and sustaining teacher teams was the core educational model designed to enhance foster student-teacher relationships. The primary academic emphasis was on literacy, numeracy, and social emotional maturity.

McK II S.T.A.R.S. (Students and Teachers on the Road to Success) was a small school that focused on international studies and language, business and social sciences. The major emphasis was on twenty-first century learners, and creating leaders to be successful in a global economy.

The primary focus of the Interdisciplinary Model Program in the Arts for Children and Teachers (IMPACT), the school of the arts, was to develop the whole child through
the arts and humanities. The motto is “Imagine the Possibilities.” Course offering in the IMPACT school included: speech, debate, choir, band, drama, AP Social Studies, AP Art History, Drawing and Painting, Fine Arts, Sculpture, and Multicultural Arts and Crafts.

Cleveland

In the Cleveland Municipal School District, 3730 students were tested in Reading, 3833 in Mathematics, 3733 in Writing, 3851 in Science, and 3782 students in Social Studies. The student total for taking all five parts of the OGT was 3558.

Report Card data for the Cleveland School of the Arts High School in the Cleveland Municipal School District indicated that 96.3% of the students passed the Reading section of the 2008-2009 OGT. The passage rate for the Mathematics section was 88.8%. The students achieved a 100% passage rate on the Writing section on the OGT. Students passed the Science section at a rate of 83.2%, and the Social Studies at a rate of 89.7%. Out of the 558 average student enrollment data, 90.7% of the students were Black, non-Hispanic; 7.4 percent were white, non-Hispanic. One hundred percent of the students were economically disadvantaged, and 6.1 percent of the students were identified as having a disability.

Cleveland School of the Arts is a specialty school in the Cleveland Metropolitan School District that incorporated all aspects of the arts into its teacher approach. The Friends of Cleveland School of the Arts (FCSA) was the primary community partner that provided support and financial resources for public performances, exhibitions, and ongoing educational activities. The FCSA mission was to create an environment that empowers children with the opportunity to achieve excellence through an arts education.
CSA offers honors courses, AP and Post-Secondary college courses. The Math Department offers courses such as pre-calculus and statistics. The CSA has a 100% graduation rate. The content area departments were as follows: Academics, Creative Writing, Dance, Band and Orchestra, Vocal Music, Theatre Arts, Graphic Design, Painting and Drawing, and Photography. One-Hundred percent of the students were economically-disadvantaged; and 700 students, grades 6-12 are enrolled in a Selective Enrollment process.

**Cincinnati**

The Cincinnati City School District located in Hamilton County tested a total of 1879 students in all five parts of the OGT. The number of students tested in Reading was 1954, Mathematics 1971, Writing 11950, Science 11079, and Social Studies 1955.

The School for Creative and Performing Arts High School in the Cincinnati School District reported a 92.5% passage rate on the 2008-2009 OGT Reading section. The students achieved passing scores on the Mathematics section by 86.0%. The Writing section of the OGT was passed by 95.3% of the students. The passage rate for the students on the Science section was 76.6%. Students passed the Social Studies section of the OGT at a rate of 83.0%. The daily average of student enrollment was 977 students. The ethnicity, socioeconomic and students with disabilities demographic data reflected that 51.5% of the students were Black, non-Hispanic; 1.2 percent Hispanic; 7.4 percent multi-racial; 39% white, non-Hispanic; 33.2% economically-disadvantaged; and 7.9 percent of the students had disabilities.

School for Creative and Performing Arts (SCPA) in the Cincinnati Public School System was dedicated to providing an environment that enables the development of the
artistic and academic potential of each student. The mission of SCPA was to foster independent thinking in a creative and challenging environment. By providing a diversified curriculum and environment for bright and talented individuals, they sought to offer preparation for higher education and professions in the arts. SCPA is a K-12 1370 student public school in Cincinnati that had arts departments that included creative writing, dance, drama, instrumental-vocal music, technical theatre, and visual arts. The academic departments included English, Mathematics, Foreign Languages, Science, and Social Studies. Students were admitted to SCPA by a highly selective arts audition.

**Columbus**

The Columbus City School District tested a total number of 3223 students on all five parts of the Ohio Graduation Test. The testing totals for the Reading section 3321, Mathematics 3410, Writing 3322, Science 3412, and Social Studies 3347.

Fort Hayes Arts and Academic High School in the Columbus City School District reported a passage rate of 83.1% on the Reading section of the 2008-2009 OGT. The Mathematics passage rate was 71.7%. Students passed the Writing section at a rate of 91.6%. The Science section of the OGT was passed at a rate of 59% and the students passed the Social Studies section at a rate of 77.1%. Average daily enrollment at Fort Hayes was 633 students. The ethnicity, socioeconomic and students with disabilities demographic reflected that 74% of the students were Black non-Hispanic, 1.6% were Hispanic, 22% of the students were White non-Hispanic. The percentage of students who were economically disadvantaged was 70.6%, and students with disabilities represented 10.7% of the students.
The Mission of Fort Hayes was to create expectations of excellence within students through challenging and collaborative learning by blending the arts, academics, and career programs. Fort Hayes Arts and Academic High School enrolled 750 students, grades 8-12, and enrolled an additional 900 students, grades 11-12 in the Fort Hayes Career Center. The Career Center had four cluster models including visual arts, performing arts, health careers, and construction/transportation systems. The high school was an arts-integrated, college-preparatory school that offered advanced placement classes in English, Biology, Government, Calculus, History, Art History, Art Studio, Music Theory, Spanish, and French. Fort Hayes was a lottery school that was a 100% school choice school that attracted students from all over the City of Columbus with no selective admission.

Dayton

The number of students who were tested in all five parts of the OGT in Dayton City Schools was 935. Nine hundred and eighty-four students were tested in the Reading content area, 1028 in Mathematics, 978 in Writing, 1037 in Science, and 1001 students were tested in Social Studies.

Stivers School for the Arts High School in the Dayton Public School System reported that 87.1% of the sophomore test-takers passed the reading Section of the 2008-2009 OGT. The Mathematics section was passed by 84.2% of the students. Writing scores reported for those students indicated that 91.8% of the students passed. Students passed the Science section at a rate of 81.9%, and 90.1% of the students passed the Social Studies section. The daily average enrollment for Stivers School for the Arts High School was 923 students. Black non-Hispanic students represented 60.6 of the students,
1.2 percent were Asian or Pacific Islander, 4 percent were Multi-Racial, and 33.6% were White non-Hispanic. Economically Disadvantaged students represented 47.4% of the students, and 10.3% of the test-takers were Students with Disabilities.

Stivers School for the Arts was a public arts magnet school that enrolled over 900 students, grades 7-12. The school was an all-audition-based school. Stivers offered AP courses in AP US History, AP World History, AP Biology, AP Language Arts, AP Language 11, AP Literature 12, AP Music Theory, and AP Calculus. The arts magnet electives at Stivers included Visual Arts (ceramics, film/video, photography, sculpture, drawing, painting, and portfolio development). Vocal and Instrumental Music electives were Jazz Band, Music Theory, Piano, Choir, and Orchestra. The theatre electives included Stage Craft (recording studio), Communication Technology, Technical Theatre, and Movement for Actors. Creative Writing courses were in Journalism and Script-writing. Dance electives included Theatre Movement. The mission of the school was “Giving our best performance.”

Data Analysis

The data in the current study was reported and compared in a series of crosstab tables appropriate for observing frequencies in categorical data. Categorical data indicates the total number of individuals or events a researcher finds in a particular category (Frankel & Wallen, 2009,p.201). The variables examined were the publicly available on-time graduate rate and Ohio Graduation Test scores (OGT) for six of Ohio’s largest urban public arts magnet high schools, and the host school district. A description of the students who were enrolled in the arts magnet high schools passage rate, on the
Reading, Mathematics, Writing, Science, and Social Studies sections of the Ohio Graduation Test was compared with all the students of the host school districts and the state. Students who were enrolled in the arts magnet high schools were compared to the students in the same districts who attended the other public high schools, with regard to their academic performance on the OGT. The comparison also included the on-time graduation rate of the students enrolled in the six arts magnet schools, to the district, and state data. The t-Test was used to compare the means of two independent samples to determine if they were statistically similar. The t-Test statistical analysis was based on the following null hypothesis: There is no statistically significant difference in the mean OGT passage rate between students attending Arts Magnet schools and non-Arts Magnet schools within the six largest Ohio urban school districts.

The importance of this research data will be informative for legislators and educational policy makers, district administrators, building principals, and parents who desire to make informed choices about educational programs, and their academic achievement that tend to graduate students on-time in urban districts in Ohio. Additionally this data can serve as baseline data for additional study in this area to statistically examine the relationship between the on-time graduation rate, OGT test scores and arts magnet school choice options.
CHAPTER 4: RESULTS

The purpose of the study was to ascertain, as one indicator, the impact of enrollment in an arts magnet high school, and the extent to which it contributes to OGT scores and on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students and the 2011 on-time graduation rate. In order to make these comparisons, the following research questions were used to guide the investigation.

1. To what extent does the 2009 OGT passage rate differ between students enrolled in the arts magnet high schools, the six target districts and the state?

2. To what extent does on-time graduation rate differ between students enrolled in arts magnet high schools and non-arts magnet high schools in the six target districts and the state?

3. Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the five content areas of the OGT?
4. Do students enrolled in the six arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?

5. To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria

The OGT Passage Rate for Six Performing Arts Schools

The passage rate for the tenth-grade students enrolled in Ohio’s large urban arts magnet high schools located in the six large districts are presented in crosstab percentage tables as reported on the Ohio Department of Education’s “Report Card.” The six large urban districts are the Akron, Canton, Cincinnati, Cleveland, Columbus, and Dayton public school systems.

Firestone High School students in the Akron Public School District achieved an 87.4% passage rate on the Reading section of the 2008-2009 Ohio Graduation Test (OGT). The students at Firestone also achieved an 85.5% passage rate on the Mathematics section, as well as, a 91.8% passage rate in Writing, an 80.5% passing rate in Science, and an 84.9% passage rate in Social Studies.

Canton McKinley High School students achieved an 83.7% passage rate in Reading on the OGT. Students achieved an 84.2% passage rate on the Mathematics section of the test. In addition, the passage rate for the Writing section was 92.9%, 76.6% on the Science section, and 79.9% on the Social Studies section of the OGT.

In Cincinnati, the School for Creative and Performing Arts High School student’s achieved a 92.5% passage rate on the Reading section of the Ohio Graduation Test. The
passage rate for the Mathematics section was 86.0%, the passing rate for the Writing section was 95.3%, the passing rate on the Science section was 76.6%, and 83.0% of the 10<sup>th</sup> grade students in Cincinnati passed the Social Studies section of the test.

Cleveland School of the Arts student’s achieved a 96.3% passage rate on the Reading section of the OGT. The passage rate for the Cleveland students on the Mathematics section was 88.8%. Students passed the Writing section at the rate of 100%. Students passed the Science section by 83.2%, and 89.7% of the students at the Cleveland School of the Arts passed the Social Studies section.

Fort Hayes students in Columbus passed the Reading section of the Ohio Graduation Test at a rate 83.1%. Seventy-one point seven percent of the test-takers at Fort Hayes passed the Mathematics section of the OGT. The Writing section was passed by 96.1% of the students. Additionally, the Science section was passed by 59.0% of the students, and the Social Studies section was passed by 77.1% of the Columbus test-takers.

In Dayton, the Stivers School of the Arts reported that 87.1% of their students passed the Reading section of the 2009 OGT. Also, 84.2% of the students at Stivers passed the Mathematics section. The Writing section was passed by 91.8% of the Stivers’ students. The OGT Science section was passed by 81.9% of the test-takers. Finally, 90.1% of the students at Stivers passed the Social Studies section of the OGT.
The OGT Passage Rate for Six School Districts

On the 2009 OGT, Akron reported that 75.2% of their students across the district passed the Reading section, 71.6% passed the Mathematics section, 85.0% of the students passed the Writing section, 62.3% of the students passed the Science section, and the Social Studies section was passed by 72.4% of the Akron school district 10th grade first-time test-takers.

The Canton City School District reported that 70.6% of their students passed the Reading section, 67.5% of the students passed the Mathematics section, 84.3% passed the Writing section, 52.3% of the students passed the Science section, and 63.7% of the 10th
grade Canton school district’s first-time test-takers passed the Social Studies section of the OGT.

Cincinnati reported that 77.2% of their district-wide students passed the Reading section, 72.1% passed the Mathematics section, 83.6% of the students passed the Writing section, 62.0% passed the Science section, and 74.4% of the Cincinnati districts’ students’ passed the Social Studies section.

The Cleveland Municipal School District reported that 64.5% of their students passed the Reading section of the 2009 Ohio Graduation Test, 56.9% of the district’s students passed the Mathematics section, 79.3% of the Cleveland students passed the Writing section, 44.0% of the students passed the Science section, and 54.2% of the test-takers passed the Social Studies section of the OGT in the Cleveland school district.

Columbus City Schools reported that 76.6% of the students in the district passed the OGT Reading section, 67.9% of their students passed the Mathematics section, 85.0% passed the Writing section, 54.9% passed the Science section, and 72.1% of the students in the Columbus City School District passed the Social Studies section of the OGT.

Dayton City Schools reported that on the 2009 OGT, 63.6% of the students in the district passed the Reading section, 58.5% passed the Mathematics section, 76.4% passed the Writing section, 42.1% passed the Science section, and the Social Studies section was passed by 53.0% of the 10th grade test-takers within the Dayton school district.
Table 3: 2008-2009 OGT Passage Rate for the Six Large Urban Districts

<table>
<thead>
<tr>
<th></th>
<th>READING</th>
<th>MATHEMATICS</th>
<th>WRITING</th>
<th>SCIENCE</th>
<th>SOC. ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akron</td>
<td>75.2</td>
<td>71.6</td>
<td>85.0</td>
<td>62.3</td>
<td>72.4</td>
</tr>
<tr>
<td>Canton</td>
<td>70.6</td>
<td>67.5</td>
<td>84.3</td>
<td>52.3</td>
<td>63.7</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>77.2</td>
<td>72.1</td>
<td>83.6</td>
<td>62.0</td>
<td>74.4</td>
</tr>
<tr>
<td>Cleveland</td>
<td>64.5</td>
<td>56.9</td>
<td>79.3</td>
<td>44.0</td>
<td>54.2</td>
</tr>
<tr>
<td>Columbus</td>
<td>76.6</td>
<td>67.9</td>
<td>85.0</td>
<td>54.9</td>
<td>72.1</td>
</tr>
<tr>
<td>Dayton</td>
<td>63.6</td>
<td>58.5</td>
<td>76.4</td>
<td>42.1</td>
<td>53.0</td>
</tr>
</tbody>
</table>

OGT Rate across Ohio

Table 4 represents the 2008-2009 OGT passage rate for the state of Ohio in the five content areas of the test. Eighty-five point four percent of the students in Ohio passed the Reading section, 81.4% passed the Mathematics portion, 89.7% passed the Writing segment, 76.0% passed the Science part, and 81.6% of Ohio students passed the Social Studies section of the OGT in 2008-2009.

Table 4: 2008-2009 OGT Passage Rate for the State of Ohio

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Mathematics</th>
<th>Writing</th>
<th>Science</th>
<th>Social Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85.4</td>
<td>81.4</td>
<td>89.7</td>
<td>76.0</td>
<td>81.6</td>
</tr>
</tbody>
</table>

On-Time Graduation Rate

The study examined the 2011 on-time graduation summary reports for each of the arts magnet high schools, their host school districts, and for the state of Ohio. The data was presented in crosstab percentage tables of the 2008-2009 cohort of students who took
the OGT as 10th graders, who were presumed to have graduated in the class of 2011. All summary data reports are publicly available on the Ohio Department of Education website. On-time graduation rate data for ethnic groups not reported by the state, due to the small number of students in the subgroup, are likewise not reported in the table columns. For the purpose of this study, the 2011 on-time graduation rate is presented reflecting two variables (ethnicity, and economically disadvantaged).

**On-Time Graduation Rate for Performing Arts Schools**

As depicted in Table 5, Firestone High School in Akron reported a 93.1% on time graduation rate for the class of 2011. Black non-Hispanic students graduated on time at a 90.9% rate, White non-Hispanic students graduated at a 94.6% on-time rate, and students who were economically disadvantaged graduated on time at a rate of 90.8%. Canton McKinley High School reported for the class on 2011, an 82.8% on-time graduation rate. The on-time graduation rate for Black non-Hispanic students was 75.8%. White non-Hispanic students graduated on time at an 89.6% rate, Multi-Racial students graduated at a 72.5% rate on time, and students who were economically disadvantaged graduated on time at a rate of 78.8%.

The School for Creative and Performing Arts High School in Cincinnati reported an 87.2% on-time graduation rate for the 2011 graduation class. Black non-Hispanic students graduated on time at a 90.2% rate, White non-Hispanic students graduated at an 85.2% on time rate, and economically disadvantaged students graduated at a rate of 95.0% on time. In Cleveland, the Cleveland School of The Arts reported a 93.4% 2011 on-time graduation rate, as is noted in Table 5. The Black non-Hispanic students graduated on time at a 90.9% rate, White non-Hispanic students graduated on time at a
94.6% rate, and students who were economically disadvantaged graduated on-time at a rate of 93.4%.

Fort Hayes High School in Columbus reported that 87.1% of their students in the class of 2011 graduated on time. Black non-Hispanic students graduated on time at an 86.6% rate, and students who were economically disadvantaged graduated on time at a rate of 85.2%. Stivers School for the Arts in the Dayton Public School District reported that the class of 2011 had an 85.3% on-time graduation rate. Black non-Hispanic students graduated on-time at an 89.9% rate, White non-Hispanic students graduated at a 78.0% rate, on time, and economically disadvantaged students graduated on-time at a rate of 82.7%.

<table>
<thead>
<tr>
<th></th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>93.1</td>
<td>90.9</td>
<td>94.6</td>
<td>90.8</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>82.8</td>
<td>75.8</td>
<td>89.6</td>
<td>78.8</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>87.2</td>
<td>90.2</td>
<td>85.2</td>
<td>95.0</td>
</tr>
<tr>
<td>CSTA (Cleveland)</td>
<td>93.4</td>
<td>94.0</td>
<td>--</td>
<td>93.4</td>
</tr>
<tr>
<td>Ft Hayes (Columbus)</td>
<td>87.1</td>
<td>86.3</td>
<td>--</td>
<td>85.2</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>85.3</td>
<td>89.9</td>
<td>78.0</td>
<td>82.7</td>
</tr>
</tbody>
</table>

Table 5: 2011 On-Time Graduation Rate 6 Performing Arts Magnet Schools
**On-Time Rate by School District**

In the Akron Public School District, there were 10 public high schools included in the reported data of the 2011 on-time graduation rate. Table 6 (2011 On-Time Graduation Rate Akron High Schools) presents the two independent variables, ethnicity and economically disadvantaged students, and data for the district’s public high schools, including the arts magnet school (Firestone H.S.) in a crosstab percentage table.

<table>
<thead>
<tr>
<th></th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>Multi-Racial</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akron Public School District</td>
<td>75.3</td>
<td>73.1</td>
<td>81.5</td>
<td>76.2</td>
<td>70.2</td>
</tr>
<tr>
<td>Akron Alternative Academy</td>
<td>4.2</td>
<td>2.9</td>
<td>8.3</td>
<td>--</td>
<td>4.8</td>
</tr>
<tr>
<td>Akron Early College High School</td>
<td>95.0</td>
<td>95.0</td>
<td>--</td>
<td>--</td>
<td>94.6</td>
</tr>
<tr>
<td>Buchtel High School</td>
<td>87.9</td>
<td>88.1</td>
<td>--</td>
<td>--</td>
<td>86.6</td>
</tr>
<tr>
<td>East Community Learning Center</td>
<td>75.1</td>
<td>77.6</td>
<td>65.6</td>
<td>--</td>
<td>76.9</td>
</tr>
<tr>
<td>Ellet High School</td>
<td>88.5</td>
<td>80.6</td>
<td>91.8</td>
<td>--</td>
<td>84.6</td>
</tr>
<tr>
<td>Firestone High School</td>
<td>9.1</td>
<td>90.9</td>
<td>94.6</td>
<td>--</td>
<td>90.8</td>
</tr>
<tr>
<td>Garfield High School</td>
<td>78.4</td>
<td>81.1</td>
<td>76.1</td>
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<td>78.4</td>
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<tr>
<td>Kenmore High School</td>
<td>70.9</td>
<td>66.3</td>
<td>77.8</td>
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<td>68.0</td>
</tr>
<tr>
<td>North High School</td>
<td>62.2</td>
<td>69.3</td>
<td>71.2</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.
On-Time Graduation Rate in Canton

In the Canton Public School District, there were four public high schools that were included in this reported data of the 2011 on-time graduation rate. Table 7 (2011 On-Time Graduation Rate Canton High Schools) presents the two independent variables, ethnicity and economically disadvantaged students, for the district’s public high schools, including the arts magnet school (McKinley H.S.) in a crosstab percentage table.

<table>
<thead>
<tr>
<th>High School</th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>Multi-Racial</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canton City Digital Academy</td>
<td>62.8</td>
<td>--</td>
<td>60.9</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Choices Alternative School</td>
<td>26.4</td>
<td>22.9</td>
<td>27.9</td>
<td>--</td>
<td>20.0</td>
</tr>
<tr>
<td>McKinley High School</td>
<td>82.8</td>
<td>75.8</td>
<td>89.6</td>
<td>72.5</td>
<td>78.8</td>
</tr>
<tr>
<td>Timken High School</td>
<td>77.1</td>
<td>74.8</td>
<td>80.2</td>
<td>--</td>
<td>79.5</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.

On-Time Graduation Rate in Cincinnati

In the Cincinnati Public School District, there were 17 public high schools included in this reported data of the 2011 on-time graduation rate. Table 8 (2011 On-Time Graduation Rate Cincinnati High Schools) presents the two independent variables, ethnicity and economically disadvantaged students, and data for the district’s public high schools, including the arts magnet school (School for Creative and Performing Arts) in a crosstab percentage table.
## Table 8: 2011 On-Time Graduation Rate Cincinnati High Schools

<table>
<thead>
<tr>
<th>School Name</th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>LEP</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aiken College and Career High School</td>
<td>56.8</td>
<td>58.7</td>
<td>--</td>
<td>--</td>
<td>63.9</td>
</tr>
<tr>
<td>Clark Montessori High School</td>
<td>79.5</td>
<td>75.0</td>
<td>82.1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Gilbert A. Dater High School</td>
<td>76.0</td>
<td>75.8</td>
<td>77.3</td>
<td>--</td>
<td>82.1</td>
</tr>
<tr>
<td>Hughes Center High School</td>
<td>68.2</td>
<td>69.0</td>
<td>--</td>
<td>--</td>
<td>75.7</td>
</tr>
<tr>
<td>Hughes STEM</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>James N. Gamble Montessori High School</td>
<td>56.1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Oyler School</td>
<td>35.4</td>
<td>20.0</td>
<td>42.2</td>
<td>--</td>
<td>50.0</td>
</tr>
<tr>
<td>Robert A. Taft IT High School</td>
<td>82.1</td>
<td>83.0</td>
<td>--</td>
<td>--</td>
<td>84.3</td>
</tr>
<tr>
<td>School for Creative and Performing Arts</td>
<td>87.2</td>
<td>90.2</td>
<td>85.2</td>
<td>--</td>
<td>95.0</td>
</tr>
<tr>
<td>Shroder Paideia High School</td>
<td>72.2</td>
<td>73.2</td>
<td>--</td>
<td>--</td>
<td>74.0</td>
</tr>
<tr>
<td>Virtual High School</td>
<td>10.6</td>
<td>7.3</td>
<td>--</td>
<td>--</td>
<td>10.7</td>
</tr>
<tr>
<td>Walnut Hills High School</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>--</td>
<td>95.0</td>
</tr>
<tr>
<td>Western Hills Engineering High School</td>
<td>40.0</td>
<td>45.9</td>
<td>--</td>
<td>--</td>
<td>52.3</td>
</tr>
<tr>
<td>Western Hills University High School</td>
<td>62.4</td>
<td>65.9</td>
<td>--</td>
<td>--</td>
<td>68.8</td>
</tr>
<tr>
<td>Withrow International High School</td>
<td>60.9</td>
<td>66.1</td>
<td>--</td>
<td>30.3</td>
<td>63.8</td>
</tr>
<tr>
<td>Withrow University High School</td>
<td>84.0</td>
<td>86.3</td>
<td>--</td>
<td>--</td>
<td>86.2</td>
</tr>
<tr>
<td>Woodward Technical School</td>
<td>54.3</td>
<td>56.2</td>
<td>--</td>
<td>--</td>
<td>61.5</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.
**On-Time Graduation Rate in Cleveland**

In the Cleveland Municipal School District, there were 25 public high schools included in this reported data of the 2011 on-time graduation rate. Table 9 (2011 On-Time Graduation Rate Cleveland High Schools) presents the two independent variables, ethnicity and economically disadvantaged students, and the data for the district’s public high schools, including the arts magnet school (Cleveland School of the Arts) in a crosstab percentage table.

<table>
<thead>
<tr>
<th>Table 9: 2011 On-Time Graduation Rate Cleveland High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl F. Shuler</td>
</tr>
<tr>
<td>Collinwood High School</td>
</tr>
<tr>
<td>Cleveland School of the Arts H. S.</td>
</tr>
<tr>
<td>Design Lab @Jane Addams</td>
</tr>
<tr>
<td>East Technical High School</td>
</tr>
<tr>
<td>Garrett Margan School of Science</td>
</tr>
<tr>
<td>Ginn Academy</td>
</tr>
<tr>
<td>Glenville High School</td>
</tr>
<tr>
<td>Health Careers Center H.S.</td>
</tr>
<tr>
<td>James Ford Rhodes H. S.</td>
</tr>
<tr>
<td>J. Addams Business Careers H. S.</td>
</tr>
</tbody>
</table>

Continued
Table 9 continued

<table>
<thead>
<tr>
<th>School Name</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>John F. Kennedy H. S.</td>
<td>43.2</td>
<td>43.7</td>
<td>--</td>
<td>--</td>
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<td>43.6</td>
</tr>
<tr>
<td>John Hay Early College H. S.</td>
<td>94.6</td>
<td>94.1</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>94.6</td>
</tr>
<tr>
<td>J. Hay Architecture and Design</td>
<td>95.0</td>
<td>95.0</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>95.0</td>
</tr>
<tr>
<td>J.Hay Science and Medicine</td>
<td>52.1</td>
<td>47.8</td>
<td>53.6</td>
<td>61.3</td>
<td>--</td>
<td>53.0</td>
</tr>
<tr>
<td>J.Marshall H. S. Law @ MLK</td>
<td>72.5</td>
<td>73.5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>72.5</td>
</tr>
<tr>
<td>Lincoln-West High School</td>
<td>42.9</td>
<td>45.4</td>
<td>37.7</td>
<td>41.7</td>
<td>42.4</td>
<td>37.7</td>
</tr>
<tr>
<td>Max S. Hayes High School</td>
<td>72.3</td>
<td>75.0</td>
<td>75.8</td>
<td>65.8</td>
<td>--</td>
<td>74.4</td>
</tr>
<tr>
<td>MC^2 STEM High School</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>New Tech. H. S. @East Tech</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>New Technology West</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Success Tech Academy School</td>
<td>77.6</td>
<td>73.0</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>77.6</td>
</tr>
<tr>
<td>The School Of One</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Washington Park</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Whitney Young School</td>
<td>93.8</td>
<td>93.8</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>93.8</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.

*On-Time Graduation Rate in Columbus*

In the Columbus City School District, there were 21 public high schools included in this reported data of the 2011 on-time graduation rate. Table 10 (2011 On-Time
Graduation Rate Columbus High Schools) presented the two independent variables, ethnicity and economically disadvantaged students, and data for the district’s public high schools, including the arts magnet school (Fort Hayes Arts and Academic H.S.) in a crosstab percentage shown below.

Table 10: 2011 On-Time Graduation Rate Columbus High Schools

<table>
<thead>
<tr>
<th></th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>LEP</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alum Crest</td>
<td>82.4</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>83.3</td>
</tr>
<tr>
<td>Beechcroft</td>
<td>87.9</td>
<td>88.1</td>
<td>--</td>
<td>--</td>
<td>88.4</td>
</tr>
<tr>
<td>Briggs</td>
<td>67.2</td>
<td>74.2</td>
<td>63.3</td>
<td>--</td>
<td>65.5</td>
</tr>
<tr>
<td>Brookhaven</td>
<td>68.6</td>
<td>69.2</td>
<td>--</td>
<td>--</td>
<td>69.4</td>
</tr>
<tr>
<td>Centennial</td>
<td>89.3</td>
<td>90.6</td>
<td>90.7</td>
<td>--</td>
<td>82.6</td>
</tr>
<tr>
<td>CAEC</td>
<td>81.8</td>
<td>81.8</td>
<td>--</td>
<td>--</td>
<td>82.8</td>
</tr>
<tr>
<td>CAHS</td>
<td>95.0</td>
<td>95.0</td>
<td>--</td>
<td>--</td>
<td>95.0</td>
</tr>
<tr>
<td>CGA</td>
<td>46.3</td>
<td>41.2</td>
<td>--</td>
<td>46.3</td>
<td>46.0</td>
</tr>
<tr>
<td>CIHS</td>
<td>--</td>
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<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>East HS</td>
<td>65.0</td>
<td>65.2</td>
<td>--</td>
<td>--</td>
<td>67.7</td>
</tr>
<tr>
<td>Eastmoor</td>
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<td>93.9</td>
<td>--</td>
<td>--</td>
<td>94.6</td>
</tr>
<tr>
<td>Fort Hayes</td>
<td>87.1</td>
<td>86.3</td>
<td>--</td>
<td>--</td>
<td>85.2</td>
</tr>
<tr>
<td>Independence</td>
<td>79.9</td>
<td>81.1</td>
<td>--</td>
<td>--</td>
<td>79.4</td>
</tr>
<tr>
<td>LM STEM</td>
<td>66.0</td>
<td>68.8</td>
<td>--</td>
<td>--</td>
<td>66.7</td>
</tr>
<tr>
<td>Marion Frkln.</td>
<td>79.0</td>
<td>81.3</td>
<td>78.9</td>
<td>--</td>
<td>77.9</td>
</tr>
<tr>
<td>Mifflin</td>
<td>67.3</td>
<td>67.5</td>
<td>--</td>
<td>--</td>
<td>68.1</td>
</tr>
<tr>
<td>Northland</td>
<td>77.2</td>
<td>77.7</td>
<td>81.4</td>
<td>66.0</td>
<td>76.5</td>
</tr>
<tr>
<td>South HS</td>
<td>55.6</td>
<td>53.4</td>
<td>--</td>
<td>--</td>
<td>53.2</td>
</tr>
<tr>
<td>Walnut Ridge</td>
<td>76.1</td>
<td>73.9</td>
<td>--</td>
<td>--</td>
<td>74.6</td>
</tr>
<tr>
<td>West HS</td>
<td>71.5</td>
<td>66.1</td>
<td>73.5</td>
<td>70.0</td>
<td>69.7</td>
</tr>
<tr>
<td>Whetstone</td>
<td>85.7</td>
<td>76.8</td>
<td>92.4</td>
<td>--</td>
<td>81.9</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.
**On-Time Graduation Rate in Dayton**

In the Dayton Public School District, there are 7 Public High Schools that were included in this reported data of the 2011 on-time graduation rate. Table 11 (2011 On-Time Graduation Rate Dayton High Schools) presented the 2 independent variables, ethnicity and economically disadvantaged students, data for the district’s public high schools, including the arts magnet school (Stivers School for the Arts H.S.) in a crosstab percentage table.

**Table 11: 2011 On-Time Graduation Rate Dayton High Schools**

<table>
<thead>
<tr>
<th>High School</th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belmont High School</td>
<td>46.3</td>
<td>48.5</td>
<td>41.8</td>
<td>47.0</td>
</tr>
<tr>
<td>David H. Ponitz Career Technology Center</td>
<td>86.7</td>
<td>87.0</td>
<td>--</td>
<td>87.5</td>
</tr>
<tr>
<td>Dunbar High School</td>
<td>69.4</td>
<td>69.5</td>
<td>--</td>
<td>72.3</td>
</tr>
<tr>
<td>Meadowdale High School</td>
<td>55.9</td>
<td>55.9</td>
<td>--</td>
<td>55.6</td>
</tr>
<tr>
<td>Stivers School for the Arts</td>
<td>85.3</td>
<td>89.9</td>
<td>78.0</td>
<td>82.7</td>
</tr>
<tr>
<td>Thurgood Marshall High School</td>
<td>79.4</td>
<td>82.8</td>
<td>--</td>
<td>77.3</td>
</tr>
</tbody>
</table>

Note: -- Numbers too small to report.
Research Question 1:

To what extent does the 2009 OGT passage rate differ between students enrolled in the arts magnet high schools, the 6 target districts and the state?

According to the findings, in Akron the Firestone High School passage rate in Reading was 12.2% higher than the district passage rate, 13.9% higher in Mathematics, 61.8% higher in Writing, 18.2% higher in Science, and 12.5% higher in Social Studies. In Canton the data revealed that McKinley High School passage rate, compared to the Canton District, was 13.1% higher in Reading, 16.7% higher in Mathematics, 8.6% higher in Writing, 24.3% higher in Science and 16.2% higher in Social Studies. Compared to the Cincinnati City School District, the School for Creative and Performing Arts students’ passage rate was 15.3% higher in Reading, 13.9% higher in Mathematics, 11.7% higher in Writing, 14.8% higher in Science and 11.6% higher in Social Studies. The Cleveland School of the Arts passage rate, when compared to the Cleveland district, indicated that they passed Reading at a rate of 31.8% higher than the district, 31.9% higher in Mathematics, 20.7% higher in Writing, 39.2% higher in Science and 35.5% higher in Social Studies. Fort Hayes students in Columbus City Schools passed the Reading section of the OGT, 6.5% higher than the district passage rate, 3.8% higher in Mathematics, 6.6% higher in Writing, 4.1% higher in Science and 5.0% higher in Social Studies. Students at Stivers School for the Arts passed Reading at rate 23.5% higher, 25.7% higher in Mathematics, 15.4% higher in Writing, 39.8% higher in Science and 37.1% higher in Social Studies than the district passage rate for Dayton. So in effect, all six schools surpassed their host districts in all five areas of the OGT consistently.
When comparing the arts magnet schools content area passage rate to the state, the data revealed that in Akron’s Firestone High School, the passage rate in Reading was 2.9% higher than the state, 4.1% higher in Mathematics, 2.1% higher in Writing, 4.5% higher in Science, and 3.3% higher in Social Studies. Canton McKinley was 0.8% lower than the state percentage in Reading, 2.8% higher in Mathematics, 3.2% higher in Writing, 0.6 percent higher in Science and 1.7% lower in Social Studies. The School for Creative and Performing Arts in Cincinnati was 8.0% higher than the state in Reading, 4.6% higher in Mathematics, 5.6% higher in Writing, 0.8% higher in Science, and 4.4% higher in Social Studies. Students enrolled in the Cleveland School of the Arts scored 11.8% higher in Reading, 7.4% higher in Mathematics, 10.3% higher in Writing, 7.2% higher in Science and 8.1% higher in Social Studies compared to the state content area passage percentage rate. The Fort Hayes content area passage rate was 1.4% lower in Reading, 9.7% lower in Mathematics, 1.9% higher in Reading, 17% lower in Science and 4.5% lower in Social Studies than the state passage percentage rate. In Dayton, the Stivers School for the Arts percentage of passage rate in the content areas showed that the students passed at a rate 3.9% higher than the state in Reading, 2.8% higher in Mathematics, 2.1% higher in Writing, 5.9% higher in Science and 8.5% higher in Social Studies.
Research Question 2:

To what extent does the on-time graduation rate differ between students enrolled in arts magnet high schools and non-arts magnet high schools in the 6 target districts and the state?

When comparing the passage rate of the arts magnet school to the school’s district, the data indicated that in Akron the passage rate in Reading was 12.2% higher than the district passage rate, 13.9% higher in Mathematics, 61.8% higher in Writing, 18.2% higher in Science, and 12.5% higher in Social Studies. In Canton the McKinley High School passage rate, compared to the Canton District, was 13.1% higher in Reading, 16.7% higher in Mathematics, 8.6% higher in Writing, 24.3% higher in Science and 16.2% higher in Social Studies. Compared to the Cincinnati City School District, the School for Creative and Performing Arts students’ passage rate was 15.3% higher in Reading, 13.9% higher in Mathematics, 11.7% higher in Writing, 14.8% higher in Science and 11.6% higher in Social Studies. The Cleveland School of the Arts passage rate, when compared to the Cleveland district, indicated that the students passed Reading at a rate of 31.8% higher than the district, 31.9% higher in Mathematics, 20.7% higher in Writing, 39.2% higher in Science and 35.5% higher in Social Studies. Fort Hayes students in Columbus City Schools passed the Reading section of the OGT, 6.5% higher than the district passage rate, 3.8% higher in Mathematics, 6.6% higher in Writing, 4.1% higher in Science and 5.0% higher in Social Studies. Students at Stivers School for the Arts passed Reading at 23.5% higher, 25.7% higher in Mathematics, 15.4% higher in
Writing, 39.8% higher in Science and 37.1% higher in Social Studies than the district passage rate for Dayton.

When comparing the Performing Arts magnet schools content area passage rate to the state, at Akron’s Firestone High School, the passage rate in Reading was 2.9% higher than the state, 4.1% higher in Mathematics, 2.1% higher in Writing, 4.5% higher in Science, and 3.3% higher in Social Studies. Canton McKinley was 0.8% lower than the state percentage in Reading, 2.8% higher in Mathematics, 3.2% higher in Writing, 0.6% higher in Science and 1.7% lower in Social Studies. The School for Creative and Performing Arts in Cincinnati was 8.0% higher than the state in Reading, 4.6% higher in Mathematics, 5.6% higher in Writing, 0.8% higher in Science, and 4.4% higher in Social Studies. Cleveland School of the Arts students performed 11.8% higher in Reading, 7.4% higher in Mathematics, 10.3% higher in Writing, 7.2% higher in Science and 8.1% higher in Social Studies compared to the state content area passage percentage rate. The Fort Hayes content area passage percentage rate was 1.4% lower in Reading, 9.7% lower in Mathematics, 1.9% higher in Reading, 17% lower in Science and 4.5% lower in Social Studies than the state passage percentage rate. In Dayton, the Stivers School for the Arts percentage of passage rate in the content areas showed that the students passed at a rate 3.9% higher than the state in Reading, 2.8% higher in Mathematics, 2.1% higher in Writing, 5.9% higher in Science and 8.5% higher in Social Studies.

The on-time graduation rate for Firestone High School in the Akron City School District was 93.1%. The on-time graduation rate for Black non-Hispanic students was 90.9%, 94.6% White, and 90.8% of the students were considered economically disadvantaged. Canton McKinley High School reported an 82.8% on-time rate. The on-
time graduation rate for Black non-Hispanic students enrolled in Canton McKinley was 75.8%, and 89.6% of White non-Hispanic students, as well as, 72.5% for Multi-Racial students. Additionally, 78.8% of the students who were economically disadvantaged graduated on time in Canton McKinley High School. The School for the Creative and Performing Arts in Cincinnati reported an 87.2% on-time graduation rate. Of those who graduated in SFCPA, the rate of on-time graduation among Black non-Hispanic students was 90.2%, for White non-Hispanic 85.2%, and for economically disadvantaged students it was 95.0%. According to the on-time graduation rate for the Cleveland School of the Arts, 93.4% of all students graduated on time. Ninety-four percent of the Black non-Hispanic students graduated on time, and 93.4% of the students who were on-time graduates were economically disadvantaged. Fort Hayes in the Columbus City School District reported an 87.1% on-time graduation rate. Eighty-six point three percent of the Black non-Hispanic students graduated on time, and 85.2% of the students who graduated on time were considered economically disadvantaged. Stivers School for the Arts in Dayton reported that 85.3% of all students graduated on time. Eighty-nine percent of the Black non-Hispanic students, 78.0% of the White non-Hispanic students, and 82.7% of the students who were economically disadvantaged graduated on time.

When comparing the 93.1% on-time graduation rate at Firestone high school in Akron, to the 75.3% on-time graduation rate for the Akron City School District, there was a 17.8% higher rate for Firestone high school. Comparing the 93.1% on-time graduation for Firestone to the 79.7% state on-time graduation rate revealed a 13.4% higher on-time graduation rate for Firestone. The Canton City School District reports a 71.2% on-time graduation rate that was 11.6% lower than the on-time graduation rate for
McKinley High School. In addition, Canton McKinley had a 3.1 percent higher on-time graduation rate than the 79.7% rate for the state of Ohio. The School for the Creative and Performing Arts reported a 23.3% higher on-time graduation rate than the Cincinnati district, and a 13.7 percent higher rate than the 79.7% rate for the state of Ohio. Comparing the 93.4% on-time graduation rate of the Cleveland School of the Arts revealed that the school on-time graduation rate was 37.4% higher than the Cleveland districts’ 56.0% on-time graduation rate, and 13.7% higher than the state of Ohio. The Fort Hayes High School data revealed a 11.3% higher graduation rate than the Columbus district rate of 75.8%, and 5.6 percent higher than the 79.7% for the state of Ohio. The Stivers School for the Arts on-time graduation rate of 85.3% was 19.8% higher than the Dayton City School District, and 5.6 percent higher than the 79.7% of the state of Ohio’s on-time graduation rate for 2011.

**Research Question 3:**

Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the 5 content areas of the OGT?

On the Reading section of the 2009 OGT, 87.4% of the test-takers at Firestone High School in Akron passed. Eighty-three point seven percent of Canton McKinley students passed the Reading section, 92.5% of the test-takers at the School for Creative and Performing Arts in Cincinnati passed the Reading section, 96.3% of students tested at the Cleveland School of the Arts passed the Reading section, 83.1% of the Fort Hayes first-time test-takers in Columbus passed the Reading section and 87.1% of the test-takers at Stivers School for the Arts in Dayton passed the Reading content area of the OGT.
Eighty-five point five percent of the students in Akron passed the Mathematics section of the 2009 OGT, 84.2% of Canton McKinley students, 86.0% of students attending the School for Creative and Performing Arts in Cincinnati passed the Mathematics section. Eighty-eight point eight percent of the students passed Mathematics at the Cleveland School of the Arts, 71.7% of Fort Hayes students in Columbus, and 84.2% of the students at the Stivers School for the Arts in Dayton passed the Mathematics section of the OGT in 2009.

On the Writing section of the OGT, 91.8% of Firestone students passed, 92.9 % of the students at Canton McKinley High School, 95.3% of the students at the School of the Creative and Performing Arts School in Cincinnati, 100% of the students in the Cleveland School of the Arts, 91.6% of the students at Columbus’ Fort Hayes, and 91.8% of the students at the Stivers School in Dayton passed the Writing section.

Eighty point five percent of the Firestone students passed the Science section of the OGT, 76.6% of test-takers enrolled at McKinley High School in Canton passed, 76.6% passed who attended the School for Creative and Performing Arts in Cincinnati, 83.2% of the students at the Cleveland School of the Arts passed, 59.0% of the test-takers in Columbus’ Fort Hayes High School passed, and 90.1% of the students that took the test at Dayton’s Stivers School For the Arts passed.

In Social Studies, 84.9% of students at Firestone passed, 79.9% of students at Canton McKinley passed, 83.0% of students attending the School for Creative and Performing Arts passed, 89.7% of the students at Cleveland School of the Arts passed, 77.1% of the students at Fort Hayes passed, and 90.1% of the students at Stivers in Dayton passed. According to the data, the six magnet schools followed a similar pattern
of achievement on the OGT passage rate. All 6 magnet schools scored the highest in Writing (W), which was reflected across the state of Ohio. Similarly all 6 magnet schools scored the lowest on the Science (S) section of the OGT as reflected statewide.

**Research Question 4:**

*Do students enrolled in the 6 arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?*

The aggregate passage rate across the five content areas in the Akron City School District was 86.0%. The aggregate passage rate for Canton City Schools was 83.5%. Cincinnati City School District students’ aggregate passage rate was 87.3%. Cleveland City School district students’ aggregate passage rate for all five parts of the OGT was 76.5%. Lastly, the aggregate passage rate for the students in Dayton was 87.0%.

The aggregate passage rate on all five parts of the OGT for the Akron School District was 73.3%. Canton City School District students’ aggregate passage rate was 67.7%. Students in the Cincinnati School District’s aggregate passage rate across all five parts of the OGT content areas was 73.9%. The passage rate across all five content areas in the Cleveland School District was 91.6%. Columbus City School District students’ aggregate passage rate across the five content areas was 76.5%. Dayton students scored an aggregate passage rate of 87.0% across the District. Students in the State of Ohio scored an aggregate passage rate of 82.6% across all five content areas on the 2009 Ohio Graduation Test as first-time test-takers.
Research Question 5:
To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

All of the arts magnet schools performed academically above the host districts and the state of Ohio with the exception of Fort Hayes in Columbus City Schools. The Fort Hayes OGT data indicated that the content area passage rate was lower than the other five arts magnet schools. In Reading, the passage rate was 1.4 percent lower than the state, 9.7 percent lower than the state in Mathematics, 17% lower in Science and 4.5 percent lower in Social Studies. The combined average for Fort Hayes was 6.1 percent lower for all 5 sections of the OGT than the state of Ohio. However the average passage rate compared to the Columbus district yielded a 5.2 percent higher rate. These data was noteworthy because Fort Hayes was the only arts magnet school that did not require enrollment criteria beyond a lottery application, and was the only school that did not have a selective enrollment process. The data suggested that there was a difference in the OGT passage rate when considering the variable of selective enrollment. Although this was beyond the scope of the present study, the Fort Hayes achievement data was noticeably lower than the other arts magnet high schools discussed in the study.

A statistical analysis was conducted utilizing the t-Test by testing two independent samples available through the Ohio Report Card data. The Report Card data was presented in aggregate percentages, which was an appropriate data format to analyze using the t-Test. For the purpose of this research, the levels of achievement in the five content areas were collapsed into two sample categories; passed and not passed. Students
who scored in the Limited and Basic range on the OGT were reported in the category of not-passed, and students who scored in the Proficient, Accelerated and Advanced range were in the category of passed.

The six tables numbered Table 12 through 17 described the passage rate on the 2008-2009 OGT for each high school within the six Ohio urban school districts represented in this study. This set of tables compared the average passage rate between Arts Magnet Schools and the other public schools within each district. Since the researcher was able to use percentages and ratios in the t-Test, the data were presented as percentages to the tenths decimal place.

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<td>Ellet</td>
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<td><strong>Firestone</strong></td>
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<td>Garfield</td>
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<td>Kenmore</td>
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### Table 13: 2008-2009 OGT Proficiency Rate for Canton High Schools

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### Table 14: 2008-2009 OGT Proficiency Rate for Cincinnati

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Note: -- Numbers too small to report.
Table 17: 2008-2009 OGT Proficiency Rate for Dayton High Schools

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<td>73.2</td>
<td>28.0</td>
<td>42.2</td>
</tr>
<tr>
<td>Meadowdale</td>
<td>45.1</td>
<td>44.9</td>
<td>66.8</td>
<td>27.6</td>
<td>35.5</td>
</tr>
<tr>
<td>SSFTA</td>
<td><strong>87.1</strong></td>
<td><strong>84.2</strong></td>
<td><strong>91.8</strong></td>
<td><strong>81.9</strong></td>
<td><strong>90.1</strong></td>
</tr>
<tr>
<td>TMHS</td>
<td>63.8</td>
<td>61.9</td>
<td>77.1</td>
<td>36.2</td>
<td>49.5</td>
</tr>
</tbody>
</table>

*The t-Test*

The t-Test allowed for a comparison of the means of two independent samples to determine if they were statistically similar. In this case, the research question was restated as a null hypothesis as stated as follows:

There is no statistically significant difference in the mean OGT passage rate between students attending Arts Magnet schools and non-Arts Magnet schools within the six largest Ohio urban school districts.
### Table 18: t-Test 2008-2009 OGT Reading Passage Rate

<table>
<thead>
<tr>
<th></th>
<th>Arts Magnet School</th>
<th>Non-Arts Magnet School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>87.4333333333</td>
<td>70.5303030300</td>
</tr>
<tr>
<td>Variance</td>
<td>41.6866666667</td>
<td>277.729221445</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>5.060742994</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) one-tail</td>
<td>0.000109142</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.770933396</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) two-tail</td>
<td>0.000218284</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.160368656</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
Two-Sample test assuming Unequal Variances

---

### Table 19: t-Test 2008-2009 OGT Mathematics Passage Rate

<table>
<thead>
<tr>
<th></th>
<th>Arts Magnet School</th>
<th>Non-Arts Magnet School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>87.4333333333</td>
<td>64.84461538</td>
</tr>
<tr>
<td>Variance</td>
<td>41.6866666667</td>
<td>270.1350096</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>65</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>6.778876211</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) one-tail</td>
<td>0.000009806</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.782287556</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) two-tail</td>
<td>0.000019612</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.17881283</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
Two-Sample test assuming Unequal Variances
### Table 20: t-Test 2008-2009 OGT Writing Passage Rate

<table>
<thead>
<tr>
<th></th>
<th>Arts Magnet School</th>
<th>Non-Arts Magnet School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>87.433333333</td>
<td>81.02727273</td>
</tr>
<tr>
<td>Variance</td>
<td>41.686666667</td>
<td>176.1792448</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>2.065701744</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) one-tail</td>
<td>0.034420819</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.833112933</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) two-tail</td>
<td>0.068841638</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.262157163</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Two-Sample test assuming Unequal Variances

### Table 21: T-Test 2008-2009 OGT Social Studies Passage Rate

<table>
<thead>
<tr>
<th></th>
<th>Arts Magnet School</th>
<th>Non-Arts Magnet School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>87.433333333</td>
<td>64.41515152</td>
</tr>
<tr>
<td>Variance</td>
<td>41.686666667</td>
<td>334.8880746</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>6.638738363</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) one-tail</td>
<td>0.000005582</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.761310136</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) two-tail</td>
<td>0.000011164</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.144786688</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Two-Sample test assuming Unequal Variances
Table 22: T-Test 2008-2009 OGT Science Passage Rate

<table>
<thead>
<tr>
<th></th>
<th>Arts Magnet School</th>
<th>Non-Arts Magnet School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>87.433333333</td>
<td>51.23181818</td>
</tr>
<tr>
<td>Variance</td>
<td>41.68666667</td>
<td>375.9652797</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>66</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>10.18077177</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) one-tail</td>
<td>0.0000000011</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.745883676</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;t) two-tail</td>
<td>0.0000000021</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.119905299</td>
<td></td>
</tr>
</tbody>
</table>

Note: Two-Sample test assuming Unequal Variances

The tables above assumed a confidence interval of 95% (critical value of 0.05).

The way the researcher interpreted this was to compare the P (T<t) two-tail value to the confidence interval of 0.05. Since most of the probabilities were less than the confidence interval (except Writing), the researcher rejected the null hypothesis and assumed there was a statistically significant difference between the means of the two samples.

According to the data, the six magnet schools followed a similar pattern of achievement on the OGT passage rate. All six magnet schools scored the highest in Writing (W), which was reflected across the state of Ohio. Similarly all six magnet schools scored the lowest on the Science (S) section of the OGT as reflected statewide. The pattern of passage rate achievement for the state of Ohio was Writing (W) as the
highest, followed by Reading (R), then Math (M), Social Studies (SS), and finally Science (S). There were three districts that followed the same pattern of passage rate as the state: Canton, Cleveland and Dayton school districts. Additionally, the Cleveland School of the Arts, and Fort Hayes in Columbus, followed the same passage rate pattern as the state. Although each district and magnet school followed the pattern of passage rate reflective of the state pattern of Writing as the highest, followed by Reading (R), and Science (S) being the lowest, Akron, Cincinnati and Columbus students scored the third highest on the Social Studies section.

Firestone High School in Akron followed the passage rate pattern of the district with the exception of Math and Social Studies (W-R-M-SS-S, Firestone) and (W-R-SS-M-S, Akron). McKinley High School in Canton differed from the state and the district due to the pattern of passage rate indication of Math being the second highest passage rate of all magnet, district and state data (W-M-R-SS-S, McKinley), (W-R-M-SS-S, Canton), and (W-R-M-SS-S, State). The School for Creative and Performing Arts in Cincinnati was the only magnet school that had the same percentage of passage rate for Math and Social Studies. However, the School for Creative and Performing Arts did follow the pattern of Writing, Reading followed by Math/ Social Studies and then Science (W-R-M/SS-S). The Cincinnati district followed the pattern of W-R-SS-M-S that was different from the state, in that Social Studies was the third highest as opposed to Math being the third highest passage rate for the state. Cleveland School of the Arts and Fort Hayes both reflected a similar pattern of passage rate (W-R-SS-M-S) as the Akron, Cincinnati and Columbus district, but different than the state (W-R-SS-M-S, Cleveland School of the Arts & Fort Hayes) (W-R-M-SS-S, State). Stivers in Dayton was the only
magnet school that reported the Social Studies section on the OGT as the second highest passage rate (W-SS-R-M-S). The Dayton school district pattern of passage rate when compared to the state, were the same (W-R-M-SS-S).

### Table 23: 2008-2009 OGT Passage Rate – Arts Magnet Schools to District Comparison

<table>
<thead>
<tr>
<th></th>
<th>READING</th>
<th>MATHEMATICS</th>
<th>WRITING</th>
<th>SCIENCE</th>
<th>SOC. ST</th>
<th>AVERAGE +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>+12.2</td>
<td>+13.9</td>
<td>+6.8</td>
<td>+18.2</td>
<td>+12.5</td>
<td>+12.7</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>+13.1</td>
<td>+16.7</td>
<td>+8.6</td>
<td>+24.3</td>
<td>+16.2</td>
<td>+15.8</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>+15.3</td>
<td>+13.9</td>
<td>+11.7</td>
<td>+14.8</td>
<td>+11.6</td>
<td>+13.5</td>
</tr>
<tr>
<td>CSOTA (Cleveland)</td>
<td>+31.8</td>
<td>+31.9</td>
<td>+20.7</td>
<td>+39.2</td>
<td>+35.5</td>
<td>+31.8</td>
</tr>
<tr>
<td>Ft. Hayes (Columbus)</td>
<td>+6.5</td>
<td>+3.8</td>
<td>+6.6</td>
<td>+4.1</td>
<td>+5.0</td>
<td>+5.2</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>+23.5</td>
<td>+25.7</td>
<td>+15.4</td>
<td>+39.8</td>
<td>+37.1</td>
<td>+28.3</td>
</tr>
<tr>
<td><strong>Average +/-</strong></td>
<td>+17.1</td>
<td>+17.7</td>
<td>+11.6</td>
<td>+23.4</td>
<td>+19.7</td>
<td>+17.9</td>
</tr>
</tbody>
</table>

**NOTES:**
+ = Above district passage rate
- = Above district passage rate

The data shown in Table 24, represents the passage rate of each magnet school by content area compared to the aggregate state scores by content area. When calculating the percentage that magnet schools scored above/below the state aggregate average by content area, the magnet schools on average scored 3.9% higher in Reading, 2.0% higher in Mathematics, 4.2% higher in Writing, 0.3% higher in Science and 3.0% higher in Social Studies.
Table 24: 2008-2009 OGT Passage Rate – Arts Magnet Schools To State
Comparison

<table>
<thead>
<tr>
<th></th>
<th>READING</th>
<th>MATHEMATICS</th>
<th>WRITING</th>
<th>SCIENCE</th>
<th>SOC. ST</th>
<th>AVERAGE +/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>+2.9</td>
<td>+4.1</td>
<td>+2.1</td>
<td>+4.5</td>
<td>+3.3</td>
<td>+3.4</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>-0.8</td>
<td>+2.8</td>
<td>+3.2</td>
<td>+0.6</td>
<td>-1.7</td>
<td>+0.8</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>+8.0</td>
<td>+4.6</td>
<td>+5.6</td>
<td>+0.8</td>
<td>+4.4</td>
<td>+4.7</td>
</tr>
<tr>
<td>CSOTA (Cleveland)</td>
<td>+11.8</td>
<td>+7.4</td>
<td>+10.3</td>
<td>+7.2</td>
<td>+8.1</td>
<td>+9.0</td>
</tr>
<tr>
<td>Ft. Hayes (Columbus)</td>
<td>-1.4</td>
<td>-9.7</td>
<td>+1.9</td>
<td>-17.0</td>
<td>-4.5</td>
<td>-6.1</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>+2.6</td>
<td>+2.8</td>
<td>+2.1</td>
<td>+5.9</td>
<td>+8.5</td>
<td>+4.4</td>
</tr>
<tr>
<td>Average +/-</td>
<td>+3.9</td>
<td>+2.0</td>
<td>+4.2</td>
<td>+0.3</td>
<td>+3.0</td>
<td>+2.7</td>
</tr>
</tbody>
</table>

NOTES:
+ = Above state passage rate
- = Above state passage rate

According to the data, as shown in Table 25, the aggregate comparison of all 5 content area tests for the magnet schools, compared to the district and state, indicated that the magnet schools scored 17.9 % higher than the district aggregate passage rate, and 2.7% higher than the state aggregate schools passage rate.
Table 25: 2008-2009 OGT Passage Rate – Arts Magnet Schools to District & State Comparison

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>DISTRICT</th>
<th>+/- DISTRICT</th>
<th>STATE</th>
<th>+/- STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>86.0</td>
<td>73.3</td>
<td>82.6</td>
<td>+3.4</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>83.5</td>
<td>67.7</td>
<td>82.6</td>
<td>+0.8</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>87.3</td>
<td>73.9</td>
<td>82.6</td>
<td>+4.7</td>
</tr>
<tr>
<td>CSOTA (Cleveland)</td>
<td>91.6</td>
<td>59.8</td>
<td>82.6</td>
<td>+9.0</td>
</tr>
<tr>
<td>Ft. Hayes (Columbus)</td>
<td>76.5</td>
<td>71.3</td>
<td>82.6</td>
<td>-6.1</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>87.0</td>
<td>58.7</td>
<td>82.6</td>
<td>+4.4</td>
</tr>
<tr>
<td>Average +/-</td>
<td></td>
<td>+17.9</td>
<td>82.6</td>
<td>+2.7</td>
</tr>
</tbody>
</table>

NOTES:
+ = Above district/state passage rate
- = Above district/state passage rate

The on-time Graduation Rate for all students attending Firestone High School in Akron was 93.1%. Black non-Hispanic student on-time Graduation Rate was 90.9%, 94.6% for White non-Hispanic students and 90.8% of economically disadvantaged students graduated on time. Canton McKinley students graduated on time at a rate of 82.8%. Black non-Hispanic student had an on-time Graduation Rate of 75.8%, 89.6% for White non-Hispanic 72.5% rate for Multi-Racial students, and a 78.8% on-time Graduation Rate for students who were economically disadvantaged. All students at the School for Creative and Performing Arts in Cincinnati graduated on time by 87.2%. Ninety point two percent of Black non-Hispanic students graduated on time, 85.2% of White non-Hispanic and 95.0% of students who were economically disadvantaged graduated on time. Cleveland School of the Arts students graduated on time at a rate of
93.4%. Black non-Hispanic students had a 94.0% on-time graduation rate, and 93.4% of the students were economically disadvantaged. Eighty seven point one percent of all students at Fort Hayes graduated on time. Black non-Hispanic students graduated on time at a rate of 86.3% and economically disadvantaged students graduated on time at a rate of 85.2%. Students attending Stivers School for the Arts in Dayton graduated on time at a rate of 85.3%. The on-time Graduation Rate for Black non-Hispanic students was 89.9%, 78.0% for White non-Hispanic students and 82.7% for students who were economically disadvantaged.

<table>
<thead>
<tr>
<th></th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>Multi-Racial</th>
<th>Hisp.</th>
<th>Asian P.I.</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>93.1</td>
<td>90.9</td>
<td>94.6</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>90.8</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>82.8</td>
<td>75.8</td>
<td>89.6</td>
<td>72.5</td>
<td>--</td>
<td>--</td>
<td>78.8</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>87.2</td>
<td>90.2</td>
<td>85.2</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>95.0</td>
</tr>
<tr>
<td>CSTA (Cleveland)</td>
<td>93.4</td>
<td>94.0</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>93.4</td>
</tr>
<tr>
<td>Ft Hayes (Columbus)</td>
<td>87.1</td>
<td>86.3</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>85.2</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>85.3</td>
<td>89.9</td>
<td>78.0</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>82.7</td>
</tr>
</tbody>
</table>

The data presented in Table 27, show the on-time Graduation Rate for the 6 Urban Districts and Racial Demographics was 75.3% of all Akron Public School students, 73.1% Black non-Hispanic, 81.5% White non-Hispanic, 76.2% Multi-Racial, 54.1% Asian-Pacific Islander and 70.2% economically disadvantaged. All students in the
Canton City School District graduated on-time at a rate of 71.2%. The on-time graduation rate for Black non-Hispanic students for the district was 67.2%, 75.2% for White non-Hispanic, 64.0% Hispanic, and 74.0% for economically disadvantaged students.

<table>
<thead>
<tr>
<th></th>
<th>All Students</th>
<th>Black N.H.</th>
<th>White N.H.</th>
<th>Multi-Racial</th>
<th>Hisp.</th>
<th>Asian P.I.</th>
<th>E. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akron</td>
<td>75.3</td>
<td>73.1</td>
<td>81.5</td>
<td>76.2</td>
<td>--</td>
<td>54.1</td>
<td>70.2</td>
</tr>
<tr>
<td>Canton</td>
<td>71.2</td>
<td>67.2</td>
<td>75.2</td>
<td>64.0</td>
<td>--</td>
<td>--</td>
<td>74.0</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>63.9</td>
<td>63.0</td>
<td>67.1</td>
<td>65.5</td>
<td>--</td>
<td>--</td>
<td>67.9</td>
</tr>
<tr>
<td>Cleveland</td>
<td>56.0</td>
<td>57.0</td>
<td>51.8</td>
<td>48.0</td>
<td>53.7</td>
<td>71.0</td>
<td>56.8</td>
</tr>
<tr>
<td>Columbus</td>
<td>75.8</td>
<td>76.1</td>
<td>77.0</td>
<td>68.4</td>
<td>67.4</td>
<td>78.4</td>
<td>74.8</td>
</tr>
<tr>
<td>Dayton</td>
<td>65.5</td>
<td>67.7</td>
<td>56.5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>65.7</td>
</tr>
</tbody>
</table>

Students in the Cincinnati School District graduated on time at a rate of 63.9%. Sixty-three percent of Black non-Hispanic students, 67.1% of White non-Hispanic students, 65.5% of Multi-Racial students, and 67.9% of economically disadvantaged students graduated on time. Cleveland City Schools reported that 56% of all students graduated on time. Black non-Hispanic students graduated on time at a rate of 57.0%, 51.8% for White non-Hispanic, 48.0% Multi-Racial, 53.7% Hispanic, 71.0% Asian-Pacific Islander, and 56.8% economically disadvantaged students graduated on time. According to the 2011 on-time Graduation Rate, 75.8% of all students graduated on time. Black non-Hispanic students graduated at a rate of 76.1%, White non-Hispanic 77.0%; Multi-Racial at 68.4%, Hispanic at 67.4%, 78.4 Asian-Pacific Islander and 74.8% of the
students who graduated on time were economically disadvantaged. Dayton students graduated on time at a rate of 65.5%. Sixty-Seven point seven percent of Black non-Hispanic students, 56.5% of White non-Hispanic students, and 65.7% of economically disadvantaged students graduated on time.

According to Table 35, when comparing the on-time Graduation Rate of the magnet schools to their host district, the results indicated that Firestone was 17.8% higher than the Akron District Graduation Rate and 13.4% higher than the state. Canton McKinley was 11.6% higher than the Canton District and 3.1 percent higher than the state. The School for Creative and Performing Arts was 23.3% higher than the Cincinnati District and 7.5 percent higher than the state. Cleveland School of the Arts was 37.4% higher than the district and 13.7% higher than the state. Fort Hayes was 11.3% higher than the district and 7.4 percent higher than the state. Stivers School for the Arts in Dayton was 19.8% higher than the Dayton District and 8.5 percent higher than the state.
Table 28: 2011 On-Time Graduation Rate –Arts Magnet Schools to District & State Comparison

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>DISTRICT</th>
<th>+/- DISTRICT</th>
<th>STATE</th>
<th>+/- STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestone (Akron)</td>
<td>93.1</td>
<td>+17.8</td>
<td>79.7</td>
<td>+13.4</td>
</tr>
<tr>
<td>McKinley (Canton)</td>
<td>82.8</td>
<td>+11.6</td>
<td>79.7</td>
<td>+3.1</td>
</tr>
<tr>
<td>SFCPA (Cincinnati)</td>
<td>87.2</td>
<td>+23.3</td>
<td>79.7</td>
<td>+7.5</td>
</tr>
<tr>
<td>CSTA (Cleveland)</td>
<td>93.4</td>
<td>+37.4</td>
<td>79.7</td>
<td>+13.7</td>
</tr>
<tr>
<td>Ft Hayes (Columbus)</td>
<td>87.1</td>
<td>+11.3</td>
<td>79.7</td>
<td>+7.4</td>
</tr>
<tr>
<td>Stivers (Dayton)</td>
<td>85.3</td>
<td>+19.8</td>
<td>79.7</td>
<td>+5.6</td>
</tr>
<tr>
<td>Average +/-</td>
<td></td>
<td>+20.2</td>
<td></td>
<td>+8.5</td>
</tr>
</tbody>
</table>

NOTES:
+ = Above district/state passage rate
- = Above district/state passage rate

In conclusion, parents who exercised the option to choose an arts magnet school in one of the six large urban districts in the state of Ohio with the intention of their children passing the OGT and matriculating through high school in four years, appears to have made a successful choice. Although enrollment as an exclusive variable was not the intended implication of this data indicating that it led to a higher OGT passage rate and on-time graduation, it was the contention that enrollment as one indicator in an arts magnet high school, did result in higher OGT test scores and on-time graduation rate. According to the data presented in this study, the arts magnet schools in the six urban districts had higher passage rate than the host district and state on the OGT in all five content areas. Additionally, the arts magnet schools had a higher on-time graduation rate than the aggregate of the district’s on-time graduation rate, as well as, the on-time graduation rate for the state of Ohio.
Chapter 5: SUMMARY, DISCUSSION AND CONCLUSIONS

Restatement of the Purpose and Research Questions

The purpose of the study was to ascertain, as one indicator, the impact of enrollment in an arts magnet high school, and the extent to which it contributed to OGT scores and on-time graduation rate. Using publicly available data, namely the Ohio Graduation Test (OGT) results and the on-time graduation rate, comparisons were made among six performing arts magnet schools, their six host districts, and statewide scores. The study compared OGT summary test results for the 2008-2009 tenth-grade cohort of students and the 2011 on-time graduation rate. In order to make these comparisons, the following research questions were used to guide the investigation.

1. To what extent does the 2009 OGT passage rate differ between students enrolled in the arts magnet high schools, the six target districts and the state?

2. To what extent does the on-time graduation rate differ between students enrolled in arts magnet high schools and non-arts magnet high schools in the 6 target districts and the state?

3. Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the five content areas of the OGT?

4. Do students enrolled in the six arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?
5. To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

Summary and Discussion of Findings

Research Question 1:

To what extent do the 2009 OGT passage rate differ between students enrolled in the arts magnet high schools, the 6 target districts and the state?

According to the data comparison, the six arts magnet schools’ aggregate average score for the reading section of the 2009 OGT was 17.1 percent higher than the host districts’ average, 17.7 percent higher than the mathematics average, 11.6 percent in writing, 23.4 percent higher in science, and 19.7 percent higher than the district averages in social studies.

The average of all five sections of the 2009 OGT, when compared to the host districts’ average, indicated that arts magnet schools’ passage rate are 17.9 percent higher than the host districts’ passage rate.

According to the data, the comparison of the arts magnet school content area passage rate on the 2009 OGT was, on average, 3.9 percent higher in reading than the state, 2.0 percent higher in mathematics, 4.2 percent higher in writing, 0.3 percent higher in science, and 3.0 percent higher in social studies. Academic achievement on all five sections of the 2009 OGT was 2.7 percent higher than the State average.
Research Question 2:

To what extent do on-time graduation rate differ between students enrolled in arts magnet high schools and non-arts magnet high schools in the 6 target districts and the state?

According to the findings, the comparison of the arts magnet schools to the State and the host districts indicate that the aggregate on-time graduation rate was 20.2 percent higher than the host districts’ average, and 8.5 percent higher than the State average. Each of the six magnet schools reported a higher on-time graduate rate than the host districts and state. Firestone High School’s on-time graduation rate was 17.8 percent higher than the Akron District, and 13.4 percent higher than the State. McKinley High School was 11.6 percent higher than the Canton District and 3.1 percent higher than the State. The School for Creative and Performing Arts reported a 23.3 percent higher on-time graduation rate than the Cincinnati Public Schools System and 7.5 percent higher than the State. Cleveland School of the Arts had an on-time graduation rate 37.4 percent higher than the Cleveland School District and 13.7 percent higher than the State. The on-time graduation rate for Fort Hayes was 11.3 percent higher than the Columbus City Schools District, and 7.4 percent higher than the State. Stivers School of the Arts in Dayton had a 19.8 percent higher on-time graduation rate than the Dayton City Schools District and 5.6 percent higher than the State. These data suggest that enrollment in an arts magnet school in six of Ohio’s urban districts made a difference in on-time graduation rate.
Research Question 3:

Does enrollment in an arts magnet school reveal a noteworthy pattern of achievement in the 5 content areas of the OGT??

According to the data, the six magnet schools followed a similar pattern of achievement on the OGT passage rate. All 6 magnet schools scored the highest in Writing (W), which was reflected across the state of Ohio. Similarly all 6 magnet schools scored the lowest on the Science (S) section of the OGT as reflected statewide. The pattern of passage rate achievement for the state of Ohio was Writing (W) as the highest, followed by Reading (R), then Math (M), Social Studies (SS), and finally Science (S). There were 3 districts that followed the same pattern of passage rate as the state: Canton, Cleveland and Dayton school districts. Additionally, the Cleveland School of the Arts, and Fort Hayes in Columbus, followed the same passage rate pattern as the state. Although each district and magnet school followed the pattern of passage rate reflective of the state pattern of Writing as the highest, followed by Reading (R), and Science (S) being the lowest, Akron, Cincinnati and Columbus students scored the third highest on the Social Studies section.

Firestone High School in Akron followed the passage rate pattern of the district with the exception of Math and Social Studies (W-R-M-SS-S, Firestone) and (W-R-SS-M-S, Akron). McKinley High School in Canton differed from the state and the district due to the pattern of passage rate indication of Math being the second highest passage rate of all magnet, district and state data (W-M-R-SS-S, McKinley), (W-R-M-SS-S, Canton), and (W-R-M-SS-S, State). The School for Creative and Performing Arts in Cincinnati was the only magnet school that had the same percentage of passage rate for Math and Social
Studies. However, the School for Creative and Performing Arts did follow the pattern of Writing, Reading followed by Math/ Social Studies and then Science (W-R-M/SS-S). The Cincinnati district followed the pattern of W-R-SS-M-S that was different from the state, in that Social Studies was the third highest as opposed to Math being the third highest passage rate for the state. Cleveland School of the Arts and Fort Hayes both reflected a similar pattern of passage rate (W-R-SS-M-S) as the Akron, Cincinnati and Columbus district, but different than the state (W-R-SS-M-S, Cleveland School of the Arts & Fort Hayes) (W-R-M-SS-S, State). Stivers in Dayton was the only magnet school that reported the Social Studies section on the OGT as the second highest passage rate (W-SS-R-M-S). The Dayton school district pattern of passage rate when compared to the state, were the same (W-R-M-SS-S). Although the percentage of students who passed the science component was lower than the percentage of students who passed the reading component (arts school, state, and district), the students enrolled in the arts magnet schools passed the science content area at higher percentage rate than students enrolled in the school’s home district and students across the state.

Research Question 4:

Do students enrolled in the 6 arts magnet high schools achieve a higher aggregate passage rate on the 2009 OGT than the students generally in their host districts and the state?
The t-Test

The t-Test (sometimes referred to as the t-Statistic) allowed a comparison of the means of two independent samples to determine if they were statistically similar. Just as in the Chi-Square test, the analysis began with a null hypothesis. In this case, the research question was restated as a null hypothesis and stated as follows:

There is no statistically significant difference in the mean OGT passage rate between students attending Arts Magnet schools and non-Arts Magnet schools within the six largest Ohio urban school districts.

The data revealed that most of the probabilities were less than the confidence interval (except Writing), therefore the null hypothesis is rejected and assumes there was a statistically significant difference between the means of the two samples. The data concluded that there was a statistical difference in the OGT scores of students enrolled in arts magnet schools and the students enrolled in the non-arts high schools in the host districts. Students enrolled in an arts magnet high school scored higher on all five sections of the OGT than those who were not enrolled in an arts magnet high school in Ohio.

Research Question 5:

To what extent do OGT scores differ in arts magnet high schools with selective enrollment criteria and arts magnet high schools that do not use such entrance criteria?

All of the arts magnet high schools performed academically above the host districts and the state of Ohio with the exception of Fort Hayes in the Columbus City school district. The Fort Hayes OGT data indicated that the content area passage rate were lower than the other five arts magnet schools. In Reading, the passage rate was 1.4
percent lower than the state, 9.7 percent lower than the state in Mathematics, 17 percent lower in Science and 4.5 percent lower in Social Studies. The combined average for Fort Hayes was 6.1 percent lower for all five sections of the OGT than the state of Ohio. However the average passage rate comparison to the Columbus district yielded a 5.2 percent higher rate. This data is noteworthy in pointing out that Fort Hayes is the only arts magnet school that did not require enrollment criteria beyond a lottery application, nor has a selective enrollment process. The data suggests that there is a difference in the OGT passage rate when considering a variable of selective enrollment. The scope of this research project was not such that a more detailed examination of selective enrollment was pursued.

Discussion

According to Ohio Education Matters (2009), state education leaders in Ohio crafted a blueprint in 2004 aimed at improving high schools based on two recommendations from the State Board of Education’s Task Force on Quality High Schools for a Lifetime of Opportunities. The Task Force aligned its recommendations with the concept of ensuring that every student graduates with the knowledge and skills needed for success in college, work and as a productive citizen. This collaborative work between school administrators, teachers, business partners and public officials focused primarily on rethinking the roles, and rules that define high school in Ohio. The task force concluded that are there many high quality schools with high achieving students, however there was still a need to improve. The report High Quality Schools: Preparing All Students for Success in Post Secondary Education, Careers and Citizenship, the
Goals of Improving Learning Conditions in Ohio’s High Schools, recommended as a priority, the development of a success driven and challenging curriculum that prepares students for success, preventing and reconnecting with dropouts, and creating a bridge between high school and post-secondary education. Additionally, the task force identified three indicators of success to measure the progress in the State of Ohio. The indicators included graduation rate, state academic content standards and work place and higher education success. Despite the unanimous adoption and positive response to the report by the State Board, the graduation rate four years later had yet to improve. In addition, the Ohio public high school graduation rate fell slightly from 86.2% in 2004-2005 to 84.6% in 2007-2008 (Ohio Education Matters, 2009).

According to the task force report, in 2004 14% of Ohio students dropped out of school before graduation. According to the data, of the 14%, 20% were economically disadvantaged, 26% were Hispanic and 32% were African-American students. This data suggests that a disproportionate number of economically disadvantaged minority students leave school before they graduate. An increase in the Dropout Rate four years later constituted an alarming urgency in trend. Ohio was ranked 11th with five other states with high numbers of dropouts according to the Annie E. Casey Foundation’s Annual Kids Count Data Book (The Anne E. Casey Foundation, 2009). Furthermore, the 2009 report “Graduating America: Meeting the Challenge of Low Graduation – Rate High Schools” identified Ohio as one of the 17 “make or break” states producing 70% of the nation’s dropouts.

The state level performance indicators provided insight relative to the 2008-2009 passage rate levels of the students in Ohio. Students who scored in the two categories
“Limited” and “Basic” were below proficient and were immediately at-risk of not graduating. This data was consistent with the Anne E. Casey Foundation findings that reported a disproportionate number of minorities students leave school before they graduate. However, there was no indication of a correlation to this trend, but the risk factor was prevalent enough to warrant some discussion.

The No Child Left Behind Act provides school choice options for parents as a strategy to increase the likelihood that their children will graduate from high school prepared for college and/or the workforce. Schools of choice can be based on a programmatic theme and academic rigor, as opposed to simply a systemic reliance on the address of the parent. Nearly seven million students were eligible for this school choice provision in the law, however only about one percent of those eligible for the option actually chose it (U.S. Department of Education, 2009d). Parents in Ohio can choose magnet schools with a programmatic focus of arts education that represents a popular theme for specialization. Magnet schools for the arts target the development of the whole child by embracing the belief that students educated in this manner, will evolve into better-educated human beings.

The data comparisons revealed that the six arts magnet schools’ aggregate average score for the reading section of the 2009 OGT was 17.1% higher than the host districts’ average, 17.7% higher than the mathematics average, 11.6% in writing, 23.4% higher in science, and 19.7% higher than the district averages in social studies.

The average of all five sections of the 2009 OGT, when compared to the host districts’ average, indicate that arts magnet schools’ passage rate were 17.9% higher than the host districts’ passage rate. According to the comparison of the arts magnet school
content area passage rate on the 2009 OGT was, on average, 3.9 percent higher in reading than the state, 2.0 percent higher in mathematics, 4.2 percent higher in writing, 0.3 percent higher in science, and 3.0 percent higher in social studies. Academic achievement on all five sections of the 2009 OGT was 2.7 percent higher than the State average.

**Conclusions**

1. Students who are enrolled in the arts magnet high schools achieved higher OGT test scores and graduated on time at a higher rate than the other non-arts magnet high schools in the host districts. The data from this study was clear in showing a trend that indicated arts magnet high schools are successful in achieving higher OGT scores in the six urban public school districts in Ohio. The six arts magnet high school aggregate average passage rate on all five sections of the 2009 OGT were higher than the schools in their host districts by at least 10% in every content area, and over 23.0% higher in the Science content area. Science was 23.4% higher than the host districts passage rate, Social Studies was 19.7% higher, Mathematics was 17.7% higher, Reading was 17.1% higher than the district’s average, and Writing was 11.6% higher.

2. This study clearly showed that the arts magnet schools in the six urban districts achieved higher OGT test scores on the five content areas than the schools in the state. The data suggested that arts magnet schools on average scored higher than private and suburban schools on the OGT. In addition, according to the data, the arts magnet schools also had an on-time graduation rate higher than the host
The six arts magnet high school aggregate average scores on all five sections of the 2009 OGT were slightly higher than the average of all the schools in the state. The arts magnet school scores were 4.2 percent higher in Writing, 3.9 percent higher in Reading, 3.0 percent higher in Social Studies, and 0.3 percent higher in Science. The data indicated that the six magnet school’s passage rate on the OGT was 2.7 percent higher than all schools in the state of Ohio.

3. The six arts magnet high school aggregate 2011 on-time graduation rate was between 11.3% and 37.4% higher than the host districts on-time graduation rate. The comparison to the state on-time graduation rate was between 3.1% and 13.4% higher than the state. Firestone High School was 17.8% higher than the Akron district and 13.4% higher than the state. McKinley High School was 11.6% higher than the Canton school district and 3.1 percent higher the state. The School for Creative and Performing Arts was 23.3% higher than the Cincinnati district and 7.5 percent higher than the state. The Cleveland School of the Arts was 37.4% higher than the Cleveland school district and 13.7% higher than the state. Fort Hayes High School was 11.3% higher than the Columbus district and 7.4 percent higher than the state. Stivers High School had an on-time graduation rate that was 19.8% higher than the Dayton school district and 5.6 percent higher than the state. The 2011 average of the six arts magnet high schools on-time graduation rate was 20.2% higher than the host districts and 8.5 percent higher than the state on-time graduation rate.
4. All six of the arts magnet schools exceeded a 91.0% passage rate on the Writing section of the OGT. The Cleveland School of the Arts achieved a 100% passage rate in Writing. The Social Studies section of the OGT passage rate fell below 80.0% in McKinley and Fort Hayes High School. The range of scores in Reading was between 84.0% and 96.3%. Seventy-seven point one percent of Fort Hayes students passed the Mathematics section, which was only arts magnet school that scored below 80.0% in Mathematics. The Science section of the OGT showed the largest disparity among the scores. The range of scores was between 59.0% at Fort Hayes, and 83.2% at the Cleveland School of the Arts. In terms of frequency, no more than two of the six magnet arts school passage rate in a single content area fell below 80.0%. There was only one instance of an arts magnet school passage rate falling below 60%, which was a 59.0% passage rate in Science for the students at Fort Hayes in Columbus.

5. Based on the t-Test statistical analysis of the content area results of the 2009 OGT, the null hypothesis: **There is no statistically significance difference in the mean OGT passage rate between students enrolled in the arts magnet high schools, and students enrolled in the non-arts magnet arts high schools within the six host districts in Ohio** was rejected with 95% confidence with the exception of the Writing section. The probability P (T<t) was 0.068841638, indicated that the confidence interval was greater than 0.05 resulting in the determination that there was a statistically significant difference between the two samples. The data revealed that there was a statistical difference in the OGT scores of students enrolled in arts magnet schools and the students enrolled in the
non-arts high schools in the host districts. Students enrolled in an arts magnet high school scored higher on all five sections of the OGT than those who were not enrolled in an arts magnet high school in Ohio.

6. All of the arts magnet high schools performed academically above the host districts and the state of Ohio with the exception of Fort Hayes in the Columbus City school district. The Fort Hayes content area passage rate were lower than the other five arts magnet schools. In Reading, the passage rate was 1.4 percent lower than the state, 9.7 percent lower than the state in Mathematics, 17.0 percent lower in Science and 4.5 percent lower in Social Studies. The combined average for Fort Hayes was 6.1 percent lower for all five sections of the OGT than the state of Ohio. However the average passage rate comparison to the Columbus district yielded a 5.2 percent higher rate.

The arts magnet high schools in Ohio achieved higher OGT scores compared to the other schools in their host districts and the across the state. Arts education is a necessary component of a balanced educational program for students in Ohio’s urban districts. The NCLB Act of 2001, developed specific criteria that designates schools in various ways from ineffective to excellent. The arts magnet schools in the six host districts are designated as “effective” and “excellent” in the state of Ohio. Although there were other schools in each of the six districts that earned similar distinctions, the combined average of the arts magnet high schools had a higher percentage of students passing all five parts of the OGT and a higher percentage of students graduating on time. In light of the success of these magnet schools, more administrative, legislative, and
community support is needed to maintain and expand arts programs in more schools in the urban districts in Ohio.

Infusing the arts into other parts of the curriculum as an instructional strategy resulted in an educational experience and outcome that was beneficial to the students who were enrolled regardless of their ethnicity and socioeconomic status. Minority students enrolled in the arts magnet schools who at times may have been disenfranchised in the public schools, achieved higher scores on the OGT and graduated on time at a higher rate. In order to transform a school into a successful arts infused school, teachers, artists, arts and community organizations must work together to craft a plan of reform that is highly persuasive in expanding existing programs and creating new ones. A vibrant connection to the local arts community combined with a deliberate campaign to increase awareness of the successes of the current arts programs leads to a more robust support from the community for not just the arts, but education in general. Students who attended the six arts magnet schools in this study were exposed to an integrative learning climate in the school that enhanced all content areas. The students were successful in passing all five parts of the OGT and matriculated through high school as a cohort of students who graduated within four years of starting high school. In order for students to reap the benefits of an arts program, they must be afforded the opportunity to attend this type of school.

Parents have different motivations for choosing an arts magnet school. Perhaps parents with artistically gifted and talented students might have chosen an arts magnet school solely for the purpose of exposing them to a high quality arts program. Students who were interested in pursuing arts as a career choice may have selected an arts magnet
school for the concentrated artistic training that was crucial to developing a competitive skill set. Additionally, parents may have decided to enroll their children in an arts magnet school for safety reasons in an effort to escape the seemingly persistent problems in the neighborhood schools.

The arts magnet schools situated the arts in the curriculum as an educational priority, and positioned the content in way that produced persistent intersections creating a basic education for all students. Based on the perceived need for schools to serve the corporate and commercial needs of America, many schools have established the priority subjects that usually marginalize the arts and render arts programs vulnerable to budget cuts. The arts magnet high schools in six of Ohio’s urban districts have resisted this trend and neutralized the marginalization of the arts in those public schools. According to Fowler (1996, p. 13) the arts magnet schools were “not just developing world-class artist, but rather developing better-educated human beings”. Does enrollment in Ohio’s urban arts magnet schools make a difference on OGT scores and the on-time graduation rate? The answer is yes.

**Recommendations for Research**

As a result of this research study and the data that was reported, recommendations for future research includes studies that expand and offer more understanding and specificity of relationships between arts magnet schools, OGT achievement scores, and the one-time graduation rate for students in Ohio’s large urban districts. Researchers can consider developing studies that examine the relationship between an OGT passage rate, and subsequent on-time graduation rate. Additionally, future research studies that examine the factors that contribute to on-time graduation despite a student falling behind
in school, and effective intervention efforts that re-aligned students with their cohort within the four years of high school would provide greater clarity in this field of study. Future research should be conducted examining students who attend arts magnet schools but are not actively engaged in the arts as a performance/creator, however consequently benefit from the school culture and curriculum as a peripheral recipient. Recommendations for research should include examining the impact of arts integration in a non-magnet school on the results of the OGT scores and the on-time graduation rate. In addition, a recommendation for more research investigating the alignment of arts charter school achievement and the on-time graduation rate in Ohio.

Inadequate funding for urban school arts programs has become a pervasive issue (Alston, 2002) instigating a need for more research that specifically examines a link between increased standardized testing scores and an arts integrated curriculum. Identifying conclusive data establishing a link between arts integrated magnet schools and the on-time graduation rate in Ohio strengthens policy rationales and advocacy for expansion and creation of arts themed schools. Another recommendation for research should include a study that provides more understanding about at-risk students and the effect that enrollment in an arts school has. The data would contribute to the research literature that seeks to better understand and add specificity in determining if enrollment in an arts magnet school makes a difference with regard to OGT scores and on-time graduation rate.

Future studies might find the data from the current study useful as a basis for expanding the investigation of achievement data to elementary and middle arts magnet
schools. Some districts in Ohio have developed and aligned “feeder” school systems that are designed to provide a K-12 experience in an arts magnet school program.

**Policy Recommendations**

In an era of increased educational accountability, school administrators and politicians are forced to address the problems facing the public schools. Students who are considered “at risk” of dropping out of school due to poor academic achievement, or being subjected to under-achieving neighborhood schools, seem to be the causalities of the system. As more affluent families moved out of deteriorating neighborhoods, those families who did not have the means, or the desire to move to a better neighborhood were often stuck and subjected to failing schools. As a result, a disproportionate number of poor minority children are at-risk of leaving school before they graduate. Desegregation strategies of placing poor students in more affluent schools and forcing more affluent White families to attend an undesirable neighborhood school was one of the reasons that, magnet schools emerged as an option of school choice.

School choice is not a new idea; however it is a perpetual phenomenon that is continuing to evolve in response to educational conditions that stratify society; resulting in outcomes and unintended consequences of automatic school assignments based on where people live. Magnet schools were initially designed to desegregate schools as a matter of choice. The foundational philosophy was to improve neighborhood schools in a way that made the neighborhood school more attractive to families and align with very specific interests and needs of students. Magnet schools have themes such as Science Technology Engineering and Math (STEM), Arts Integration, and Technology to name a few. Creating a market concept in the school selection process, allowed parents and
families to shop for the best school for their children’s needs, in turn creating a competitive climate designed to improve all public schools. Additionally, school vouchers was a concept that gave direct financial assistance coupons to families who had the desired to enroll in a private school as an alternative to being assigned to a failing public school based on their address.

School choice, in theory was a noble idea, however is not without problems. If White more affluent parents had the option to choose, and the choice was to move away from the neighborhood school and select schools of like-minded and similar economic status families, school choice would effectively re-segregation schools. Consequently, predominately minority and poor children will continue to fill the failing public schools.

For example, in Columbus City Schools, the return of the neighborhood schools concept re-emerged and has resulted in largely segregated school buildings again. Schools in predominantly White more affluent areas of town were populating those neighborhood schools. Students, who went to neighborhood schools in the minority and poorer areas of town, also populated those schools.

Magnet schools have successfully attracted students to neighborhood schools. Attracting students back to the neighborhood school because of the special programmatic emphasis of the magnet school essentially created a special school in an undesirable neighborhood. In essence the neighborhood was not improved, nor was it a benefit to the neighborhood children and families. Many magnet schools had enrollment requirements that acted as weeding-out filters for students who failed to meet the selection criteria (Neild, 2004). Opponents of magnet schools fear the “creaming” of the best students from the neighborhood schools, at the expense of neighborhood schools. A policy
recommendation for urban districts is to develop a selective enrollment process for the arts magnet schools that allow successful schools to grow in neighborhoods that actually benefit the families and children of the neighborhood. A highly selective enrollment process should make allowances for a portion of candidates that live in the neighborhood. The cause of the increased OGT scores and the on-time graduation rate is not exclusively linked to enrollment in an arts high schools, however the on-time graduation is an indicator that students tend to graduate within four years of entering these arts magnet high schools.
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