

ABSTRACT

MCCOMB, ERRIN MONIQUE. Impact of Educational Choice on Academic Outcomes.

(Under the direction of Robert C. Serow.)

The purpose of the research was to determine if there are there differences in the educational outcomes of students choosing non-specialty and those who choose to remain at their base schools. This study attempts to test some of the assumptions regarding the positive impacts of parents engaging in school choice as it relates to their students' academic performance.

This non-experimental comparative study was conducted with existing school data. This study compares end-of-grade test scores, demographics, and academic outcome variables of middle school students attending base schools with students attending non-specialty transfer schools. Data from the Wake County School System in North Carolina were appropriate for use in this study because they allow students to transfer to non-specialty schools. The transfer option, with some restriction, allows students in the district to transfer to other schools in the district. The data obtained and examined in this research span over three academic years, 1998-2000. The variables are defined and reported by the Wake County Publics School System Office of Evaluation and Research. The Wake County Public School System compiled the data set containing all demographic and outcome variables for this study.

The findings from the analysis indicated that base school students had higher reading mean scores than students who transferred to non-specialty schools all three years. Additionally, findings indicated that base school students had higher math mean scores than transfer students for all the three years. Both quantitative and qualitative

differences between school groups (base/transfer) were noted for math. There were no significant differences in the rates of remediation between the students who attended base schools and those that transferred to non-specialty schools. Further analysis indicated that suspension for girls in base schools was higher than the mean for girls in transfer schools. Boys in the base schools had higher rates of suspension than boys in transfer schools. Boys had higher rates of suspension than girls in both school types.

IMPACT OF EDUCATIONAL CHOICE ON ACADEMIC OUTCOMES

by

ERRIN M. McCOMB

A dissertation submitted to the Graduate Faculty of North Carolina State University
in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

EDUCATIONAL RESEARCH AND POLICY ANALYSIS

Raleigh

2002

APPROVED BY:

Dr. Robert Serow
Chair of Advisory Committee

Dr. Paul Bitting

Dr. Anthony Rolle
Co-chair of Advisory Committee

Dr. Sandra Williams

Dedication

To the only wise GOD, Now unto HIM who is able to keep you falling and present you faultless before the presence of HIS glory with exceeding joy. To the only wise GOD our SAVIOUR, be glory and majesty, dominion and power both now and forever.

AMEN

Teresa A. McComb (Mom), my constant energy source, GOD has blessed me to enter in the world through you. You taught me that learning is a lifelong process ---and in my case school was almost as long!

IT"S ALL OVER!

Michael J. West, I appreciate your acceptance of my absences. What will I replace my excuse for not wanting to cook with?

GOOD, BAD, or INDIFFERENT--IT IS DONE!

Shantel L. Samuel, I admire your focus and dedication---thanks for inspiring me.

SWEEEEEEEEEEET!

Biography

Errin M. McComb

Errin M. McComb was born on May 27, 1973 to Teresa A. McComb. Errin attended The University of North Carolina at Greensboro and in 1995 obtained a Bachelor of Arts in Human Development and Family Studies. In 1999 Errin was awarded her Master of Arts Degree in Child and Family Development from The University of Georgia. Errin has been a seeker of knowledge since birth.

Acknowledgements

I would like to thank Dr. Robert C. Serow, my advisor and chair for all of the assistance he offered during the acquisition of this degree. Not once did he lose his cool.

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CHAPTER 1

INTRODUCTION

Over the last thirty years, the federal government, state legislatures, state agencies, local school boards, and local administrative units have all been caught in successive waves of school reform (Lunenburg, 1999). A Nation at Risk, a report completed in 1983 by The National Commission on Excellence in Education, was an announcement to the nation that schools were not adequately preparing students. This report caused educators, families, and public officials to take a closer look at schools and school quality. This report spurred additional school reform efforts, with choice being one of the key principles of the reform efforts. Kozol (1991) conducted school observations that led to the characterization of schools as unhappy places for children. Schools also were portrayed as broken, failed systems (Finn, 1997). Still, other studies pointed to the outdated schedule design and teaching methods described as being, “little affected by sound research into effective instructional techniques” (Finn, 1997, p.198). An analysis by the Organization for Economic Cooperation and Development concluded that schools in the United States “can broadly be characterized as mediocre at best” (OECD, 1994). These alarming assertions caused attention to be given to what was happening in our schools.

While many were criticizing schools, others documented the successes of schools. Reports indicated positive outcomes were rising in America’s schools despite public perception to the contrary (Henderson, 1993). In 1990 the Sandia National Laboratories, a component of the United States Department of Energy, completed a report on the status

of American education. The report described American education in much more favorable terms than A Nation at Risk. This report ran counter to conventional wisdom and was generally ignored. Some feared that the report would be considered as a “call for complacency at a time when just the opposite is required” (Schrag, 1997, p.74). Positive reports were thwarted by the National Assessment of Educational Progress findings that twelfth grade reading scores were lower in 1994 than 1992. This study found that thirty percent of high school seniors were not basic readers.

The perceived failure of schools was attributed by some to what is referred to as the monopoly status of schools. Monopolies are characterized as slower to innovate and less responsive to consumers than competitive industries. Monopolies typically occur when only one entity produces and controls distribution of a product. This was said to be the case with education.

“It’s time to admit that public education operates like a planned economy, a bureaucratic system in which everybody’s role is spelled out in advance and there are few incentives for innovation and productivity. It’s no surprise that our school system doesn’t improve: It more resembles the communist economy than our own market economy” (Shanker, 1989).

This disenchantment with public school education was credited for an exodus of students to private, parochial, and home schools (Barr & Parrett, 1997). From 1984 to 1994, the number of home-schooled students in the United States increased from 15,000 to 350,000 (Jeub, 1994). Yearly, increasing numbers of public school teachers sent their children to private schools (Henderson, 1993). Privately funded organizations further enabled parents to move their children from public schools, by establishing grant

programs that provided tuition vouchers for private schooling (Walsh, 1996). Families were seeking solutions to schools that were perceived as failing.

Choice, although limited by economic and societal factors, has generally been available in most areas of life and some families and politicians feel this should also apply to education. Families had choices about preschool and post secondary schooling but few choices concerning elementary and secondary schooling. There has been a great deal of research attention given to the design and implementation of school choice programs, but less attention to the equally important reasons why parents choose and how parents choose. Overall, the research on the relationship between parental choice and educational outcomes is sparse and inconclusive. The small amount of research on educational choice that has been reported is spread over a wide range of policies and programs. Researchers have turned primarily to private schools to examine the impact of parental choice (Ogawa & Dutton, 1994), overlooking the impact of the choices of parents who participate in controlled choice options in public schools. Additionally, school choice research has focused on the actual program parents choose, not the act of choosing. The lack of attention to the act of choosing, as well as other limitations, leaves a gap in the literature as it relates to the impact of parental choice on academic outcomes of students that participate in public school controlled choice programs. Therefore, this dissertation will examine the act of choosing, factors that may influence choosing, and how the act of choosing impacts academic outcomes.

Background

From the Progressive Era in the early 1900's, control of education was increasingly located in a centralized bureaucracy composed of professional educators and

boards of education. There was ongoing controversy over the extent of this bureaucratization and centralization. Some saw public schools as a monopoly (Witte, 1990). Those who criticized the monopoly argued that schools needed improvement but in the current system had little incentive to change because schools controlled supply (Tyack, 1990). The modern debate over school choice –the right to freedom and ability of parents to choose for the children the safest and best schools -- first emerged as a public policy issue in the United States in the 1950's (Brouillette, 2001).

Milton Friedman articulated one of the earliest observations on the role of government in education and proposed a plan for publicly financed school vouchers. According to Friedman (1962), primarily government paid for formal schooling.

This situation has developed gradually and is now taken so much for granted that little explicit attention is any longer directed to the reasons for the special treatment of schooling even in countries that are predominantly free enterprise in organization and philosophy. The result has been an indiscriminate extension of governmental responsibility (Friedman, 1962, p. 85).

Therefore, schools and school districts needed free market competition. Free market economics, according to Friedman, when applied to education suggested that competition would improve schools just as it did business. The premise was relatively simple: Schools that were effective would attract students and funding, and those that were ineffective would not. Friedman (1955) suggests that competition would do much to promote a healthy variety of schools and parents would send their children to schools they felt were educating them sufficiently.

During the 1950's and 1960's there was a shift of focus from efficiency in schools to equity. The 1954 Brown decision allowed Black students to attend formerly all White schools. While this decision seemingly created options for choice, Black families were faced with multiple reasons for not pursuing this alternative. Segregationists used freedom of choice plans to preserve racial exclusivity. For ten years following the Brown decision many school districts proposed freedom of choice plans. These plans were designed to avoid the requirements of school desegregations. The Supreme Court, consequently, ruled that this freedom of choice was not a sufficient desegregation remedy (Fuller & Elmore, 1996). Thus, schools were forced to seek other remedies. The issues related to desegregation continued to impact the development and progression of schools.

In April 1983, the National Commission on Excellence in Education produced its landmark report on education, *A Nation at Risk: The Imperative for Educational Reform*. The highly critical report expressed the views of the 18-member panel that education in America was in serious trouble and that drastic reforms were necessary to revive the faltering school system (National Commission Excellence in Education, 1983). Many policy makers continue to agree that America's elementary and secondary school system is failing (Finn, 1997), thus strengthening the consideration of choice as an option.

Most proponents of school choice use some version of Rational Choice Theory to support their proposals (Raywid, 1992). Rational Choice Theory was originally developed by economists and philosophers and is a very large field with a vast literature. Traditionally, rational choice is represented as the selection of an optimal solution to a problem. A rational choice is held to be one in which the following elements are present.

1. There is a feasible set of actions that can lead to the desired end.
2. The consequences of each action can be assessed as possessing outcomes that are characterized by certainty, quantifiable risk, or uncertainty.
3. The feasible set of actions is ranked according to the probability what they will result in the desired outcome.
4. The participant chooses the alternative that has the best chance of satisfying their desires. (March & Simon, 1958; Elster, 86; Slote; 89).

Rational choice theory, as it relates to education, rests upon two sets of assumptions: one about parents (the demand side) and one about school districts and school leaders (the supply side). The underlying components of the theory suggest that school leaders wish to maintain or increase enrollment and maintain or increase revenues. If threatened by the loss of enrollment or revenue, school leaders would be willing to compete with other schools for students and revenue. The theory assumes school leaders are capable of expanding their supply of high quality educational programs to meet parents' demands.

Another relevant framework, when considering issues related to educational choice, is Social Choice Theory. Social choice theory investigates procedures that attempt to blend the preferences of many individuals into a social ranking of alternatives. The fact the individual interaction can result in unexpected, possibly nonsensical, social outcomes is a key element in social choice theory (Johnson, 1998). For example, in relation to education, even if all people agree that schools need to be improved, they may still disagree about how the improvements should be made. This lack of agreement has led to the development of many types of programs, all thought to be the solution to the problem.

As mentioned previously, many reformers note the need for innovations in the way children are educated. One of the most important choice elements in the reform

movement today is decentralized school governance and competition between schools to develop new instructional strategies (Malcolm, 1998). A central assumption in arguments promoting market mechanisms in education is that choice and competition between autonomous providers will lead to increased quality options for parents. West, a vocal critic of public provision, claims that since innovation tends to originate outside the state sector in education, competition would undermine the bureaucratic education monopoly, thereby reducing costs, increasing quality, and introducing innovation (West, 1996). Chubb and Moe (1990) suggest that diversifying school options would be liberating to consumers. The United States National Governors' Association (1986, p.7) further contends that if parents are allowed to choose their children's schools, "Innovative programs will spring to life."

While it has taken over 40 years for the advocates of greater choice and competition in education to grow into a nationwide movement (Brouillette, 2001), many school systems have adopted varied programs labeled as choice options. Used loosely, the term choice has numerous meanings, ranging from the act of choosing to the designation of actual programs. Despite the multiple meanings, advocates of school choice agree that if parents could choose the schools their children attend, schools would have incentive to improve in order to attract students (Rothstein, 1993). Many see exercising greater parental control, by participating in various school choice options, as an effective way to help fix the problems with education. However, analysts and researchers who agree that parental choice could foster educational reform disagree on the optimal choice program (Levin, 1987).

Few studies have examined behaviors of parents who participated in choice programs. This lack of information contributes to the difficulty in determining which variables impact parental choice. Of these studies, one surveyed parents who sent their children to independent, neighborhood schools. Another was based on a national survey seeking to determine if and how parents generally choose schools and how a federal tuition tax credit might affect parents' choices. A third survey explored parents' reasons for transferring their children into or out of one public school system. Taken together, the findings of these studies suggest that those parents who are most likely to choose tend to be dissatisfied with schools and are better educated, regardless of income. In addition, the results of recent research suggest that school choice might contribute to improved achievement (Gameron, 1996; Algozzine, et.al., 1999; West, 1996), decreased student violence (Barr & Parrett, 1997) and greater student and parent satisfaction (Siebold & Jundson, 1996).

Definition of Key Terms

The development of school choice options elsewhere has taken a variety of forms. The variety of public school choice initiatives has resulted in the use of the term school choice to define a number of programs. The following key terms were operationally defined for this study.

Base Schools – Student's school assignments based on the location of the student's home.

Charter Schools – Schools formed through legislative provisions allowing access to public school funding without adherence to many bureaucratic regulations.

Controlled Choice – A choice plan that allows students to move from school to school but places parameters on who might move and/or where they might move.

End of grade tests- assessments of reading and math achievement based on grade level expectations

Home Schools – Schooling delivered at home by parents.

Intradistrict Choice – A plan for student assignment to schools that allows parents to select a school that is within the geographic school district in which they live, but which is different than the local education agency school assignment.

Magnet Schools – Schools with a special instructional interest that were designed to attract students to underutilized buildings or to increase ethnic diversity in a school.

Non-specialty schools- Public schools that have no academic or scheduling enhancement.

Private Schools – Schools owned and operated by a person or group other than public schools.

Standard Course of Study- instructional objectives that North Carolina teachers are expected to teach during school year.

Voucher – A ticket with a value equivalent to the cost of a student’s education that can be used to purchase schooling in a public or private school.

Limitations of Study

The study was conducted in one school district in North Carolina; the findings may not be generalizable to other school districts or states throughout the country. Despite the fact that the North Carolina End-of-Grade tests are developed in line with the North Carolina Course of Study, it is impossible to be certain teachers utilized the Standard Course of Study to develop lessons. Although, this study acknowledges that there are a variety of factors that describe academic outcomes, this study is limited data that has been previously been collected and recorded to describe student outcomes.

This study is intended to be significant for both policy and practice. In terms of policy, it can assist school systems with developing and modifying school choice programs specific to the needs of the parents and students while adhering to state instructional guidelines. This study will inform those making school selection choices about the impact of exercising the power of choice.

Research Questions

One main research question will be addressed in this study:

Are there differences between the educational outcomes of students attending base schools and those of students who transfer to non-specialty schools?

In order to address this question specifically, the following questions will be posed:

1. Are there differences in the standardized end-of-grade reading scores between students attending base schools and those who transfer to non-specialty schools?
2. Are there differences in standardized end-of grade math scores between students attending base schools and those who transfer to non-specialty schools?
3. Are there differences in remediation rates between students attending base schools and those who transfer to non-specialty schools?
4. Are there differences in suspension rates of students attending between students attending base schools and those that transfer to non-specialty schools?
5. Are there significant demographic differences among variables that predict achievement for those students who choose non-specialty and those who remain at their base schools?

Analytic Techniques

Once the data are obtained, univariate and multivariate statistical analyses will be conducted to examine relationships among all variables. Analyses were generated by using the Statistical Processing for Social Sciences (SPSS) software package. Univariate

statistics – means, medians, modes, standard deviations, ranges, percentiles, and t-scores will be used to generally describe each variable. Multivariate statistics – correlations, analysis of variance (ANOVA), discriminate analyses, and factor analyses will be used to generate scales, explain variability, and make inferences.

Data

The sample of students included in this study will be from the second largest school district in North Carolina. This research will use variables defined and recorded by Wake County Public School System. The data obtained and examined will span three year academic years, 1997-2000. The data analyzed will follow middle school students over three enrollment periods in Wake County Middle schools.

Summary

Chapter One framed the discussion that was basic to this study. It provided information fundamental to the topic including the research problem, trends and relevant research on school choice, the purpose of the study, the research questions and definitions of key terms. Chapter Two will review research related to the historical development of school choice. The discussion in Chapter Two will evolve into discussion regarding the impact of choice on academic outcomes, who chooses, and the base for choice. This chapter also will summarize previous research, the meaning of this research, and how it related to this study. Chapter Three will describe the design of the study including procedures and specific steps followed in conducting this research. Chapter Four will present the analysis and major research findings of the study, organized in terms of the questions posed in Chapter One. Chapter Five will contain conclusions, implications, and recommendations for further study.

CHAPTER 2

LITERATURE REVIEW

Education reform is designed to improve the quality of education. School choice represents a kind of restructuring that comes about as a result of education reform. Plans for school choice involve parents' control or influence over school selection for their children (Witte,1990). Studies from school choice experiments suggest that school choice can be a powerful engine for parental involvement in their child's education (Vassallo, 2000.) Research shows that parental involvement in a child's education is a strong predictor of student achievement: typically, the more involved the parent, the better off the child (Eccles & Harold, 1993, Laso, 1982). The concept of choice has been considered to be a catalyst to bring about change in school settings. This chapter gives a historical perspective of school choice, as well as a review of literature related to choice theories. Additionally, the reasons parents engage in choice, characteristics of parents that choose, and how parents choose are discussed. Attention is also given to the various types of choice programs available and the outcomes of choosing.

Historical Perspective of School Choice

The modern debate over school choice –the right to freedom and ability of parents to choose for the children the safest and best schools -- first emerged as public policy issue in the United States over 40 years ago (Brouillette, 2001). Friedman, a Nobel Prize-winning economist, was one of the earliest proponents of market based school choice initiatives. Friedman articulated observations on the role of government in education and proposed a plan for publicly financed school vouchers in 1962. According to Friedman

(1962), primarily government and non-profit organizations paid for formal schooling.

This situation has developed gradually and is now taken so much for granted that little explicit attention is any longer directed to the reasons for the special treatment of schooling even in countries that are predominantly free enterprise in organization and philosophy. The result has been an indiscriminate extension of governmental responsibility (Friedman, 1962, p.85).

In his proposed voucher plan Friedman suggested that governments could require a minimum level of schooling, which would be financed by giving parents vouchers redeemable for a specified maximum sum per child per year to be spent on “approved” educational services. Parents would then be free to spend this sum and any additional sum they themselves provided on purchasing educational. The educational services could be rendered by private enterprises operated for profit or by non-profit institutions. Insuring that the schools meet some minimum standard requirement would be the sole educational role of government. The assumption was this would allow parents to express their views about schools by withdrawing their children from one school and sending them to another, thus launching many schools to meet the demands of the parents.

While Friedman implied schools would be created to meet the demands of parents. There were limiting and exclusionary aspects of his proposed voucher system. The type and possibly the caliber of schooling parents would be able to acquire for their children would not be equitable. The affluent families would be able to use, in addition to the voucher, personal resources. While families with less wealth would not have the same opportunities to attend certain schools or engage in additional educational enrichment activities. While Friedman’s ideas have not been fully adopted, there have

been other proposed and initiated choice plans that use some of the same elements he proposed. Details of such plans will be described in the remainder of the chapter.

During the 1960's magnet schools were created as a popular alternative to achieving the goals of desegregation without the hostility and disturbance that often accompanied the process of forced busing. Magnet plans aimed at making schools with underrepresented ethnic populations attractive in order to bring all groups back into the schools. Families voluntarily chose to send their children to these schools. Offering a range of choices has been promoted as more efficient than reaching desegregation through forced assignment. Rossell (1990) found voluntary desegregation plans, such as magnet programs, achieved interracial exposure in an effective and efficient manner.

During the late 1960's and 1970's choice initiatives were created through free schools and alternative school movements (Raywid, 1984). The perceived uniformity of education systems in combination with varying student and teacher needs and interests led to the conclusion that there was no one best school for everyone (Raywid, 1984; Tyack, 1990). Schools were built to process large numbers of students and were considered incapable of reaching youngsters who were involved in family breakdowns or other stressful social conditions (Ravitch & Viteritti, 1997). Teachers at alternative schools seemed to be able to deal with students that had social problems by using varied teaching methods in attempts to address the diverse ways students learned. The uniformity of the twentieth century system of public education was seen as unresponsive to both students and teachers and the alternative school models were well received.

Despite the ongoing reform efforts that included choice as a primary element, the release of A Nation at Risk (1983) received widespread attention and spurred the desire

for changing the nations' schools. The report told the country that schools were not adequately preparing students.

Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, 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. If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war (National Commission on Excellence in Education, 1983, p. 5).

One response to the report was to create stronger reform efforts. Others responded by challenging the accuracy of A Nation at Risk. Berliner and Biddle (1995) contended that the educational crisis reported in A Nation at Risk was manufactured through the use of simplistic analyses, misuse of data, and confusing reports of empirical results. In 1990, the Sandia National Laboratories completed a counter report on the status of American education. In the report, a careful analysis of the status of education was conducted and the major findings contradicted claims that were found in A Nation at Risk (Berliner & Biddle, 1995). This report was not widely distributed, therefore and did not receive widespread attention and the development of additional educational initiatives aimed at repairing the educational problems continued.

Following A Nation at Risk, commitment was made to focus on the education system as it was acknowledged that education was the key to our nation's future. Choice, involving the public and private sectors, was thought to be a mechanism for creating options. Given that there is no one best school design, deliberate diversification of schools was seen as important to accommodating all students and enabling each to succeed. Thus, the idea that students and teachers perform better and accomplish more when placed in environments they have chosen rather than in those assigned was posited. A key component of the idea was that parents and students had sufficient information and wisdom to make wise decisions about school selection (Berliner & Biddle, 1995; Nathan, 1987).

Funding for school choice was an issue that focused on the broader introduction of the use of vouchers. While the voucher system was never instituted a national choice option, several states developed local and statewide voucher programs. The methods these states have developed have been different. Details of such programs will be included later in this chapter.

During the consideration, development and implementation of voucher and magnet choice options, control of public schools continued to be by the local state, and, federal governments, and by ancillary structures such as textbook publishers, testing services, and accreditation agencies (Raywid, 1984). In recognition and response to concerns that communities and schools differ widely, policy makers considered ways to allow schools to act at their discretion. Schools feel that they are most attuned to the needs of students and are the most appropriate body to make decisions for the school (Berliner & Biddle, 1995). Allowing the governance of schools to be handled within

schools provides opportunities for flexibility and site-based decisions, and responsiveness to parents and community (Berliner & Biddle, 1995).

In an effort to allow schools to have autonomy and to avoid allocating public funds to private schools, charter schools were endorsed as a means of allowing reform efforts and choice in public education. Charter initiatives shared some common ground with free market choice considerations. America's existing system of public education was believed to inhibit the emergence of effective schools because it naturally limited and undermined school autonomy. There was an inherent tension between bureaucracy and autonomy in schooling. Bureaucracy imposed structure and requirements while denying schools the discretion to exercise professional expertise. In essence, bureaucratic school governance was inflexible and prevented team operation by principals and teachers. Teams, empowered to make decisions, tended to be more productive. "The key to effective education rests with unleashing the productive potential that is already present in the schools and their personnel" (Chubb & Moe 1990, p. 187).

Critics of public schooling believed that the old system had to be redesigned to create an organization whose mission was education rather than self-perpetuation. Teachers wanted to be treated as professionals whose expertise was taken seriously, not as factory workers who followed directions from management. While Chubb and Moe (1990) stated that their perspective on organization and student achievement was in agreement with most basic claims of the effective schools literature, school reforms, such as the effective schools movement, they believed, were likely to fail if they left traditional institutions of educational governance unchanged. "In our view, these institutions are

more than simply the democratic means by which policy solutions are formulated and administered. They are also fundamental causes of the very problems they are supposed to be solving” (Chubb & Moe, 1990, p. 18). Calls for choice coming from governance concerns reflected a concern about all children being molded alike. Schools under the control of government were seen as inculcating official knowledge rather than responding to student needs (Berliner & Biddle, 1995). Charter schools were a response to the perceived need to deregulate schools. Charter school legislation allowed groups of teachers, parents, and some private individuals or agencies to apply to be chartered to operate schools that were publicly funded but free from many of the regulations generally placed upon public schools.

While there has been voiced opposition to school choice, a recent study revealed that the public is generally pleased with schools but still wants improvement. In response to a 1999 Phi Delta Kappa, Gallup Poll question, 71% of the respondents indicated they favored reforming the current system of public schools, while 27% favored looking for an alternative system. Americans, aware of the challenges facing public schools, seemed more interested in fixing rather than abandoning them. When given an array of options for school improvement, respondents strongly preferred solutions based on more community involvement than giving public funds to private schools through vouchers and tuition tax credits (Puriefoy, 2000). The Task Force on Parent Involvement and Choice (1991) concluded, “Since each state bears the ultimate ownership of and therefore the ultimate responsibility for public schooling within its borders, the role of governors, state legislators, and state departments of education should – and, we think, must – be to establish educational diversity and parent/professional choice as the new

basis for all public schooling in their state” (p. 62). Thus, this task force and others supported the state responsibility for offering programs that met diverse needs. In the report, Time for Results, the National Governors’ Association showed the strong support of school choice (Task Force on Parent Involvement and Choice, 1991). Therefore, contributing to school choice continuing to be firmly embedded in the national agenda (Fuller & Elmore, 1996; Young & Clinchy, 1992).

Theoretical Basis for Choice

Proponents of free market education pointed to the benefits of competition and the power of consumers. Hence, schools that wanted to lure customers improved their output and were vigilant about costs. Further, better and less expensive schools would result (Chubb & Moe, 1990, Freidman, 1962; Thernstrom, 1991). Proponents believed that schools would want to differentiate their product to become competitive with other schools.

Issues of free market theory and schools were closely related to issues of schoolgovernance. Chubb and Moe (1990) held that private schools were organized more effectively than public schools due to their autonomy. Some public schools were found to achieve comparable autonomy because of favorable environments and weak bureaucratic control. In analyzing comparisons between public and non-public schools, Chubb and Moe concluded, “Were we to restrict our attention to public schools, there would be substantially less institutional variation to explore – and less of a basis for appreciating how seriously constraining the traditional system of education is” (Chubb & Moe, 1990). Public schools were subject to direct control through politics, private schools

through markets. Private schools were free to organize in any way and bureaucracy tended to be unattractive to them.

Many people questioned whether market analysis applied to schools. With market analysis, there was the underlying assumption that human interaction could be reduced to a commercial transaction. Additional concerns centered on whether parents, when given the opportunity to choose, chose on the basis of strong, highly rated programs. Yet, while parents believed that strong programs were important, they tended to select schools on the basis of expediency issues such as proximity (Bracey, 1997; Wilson, Olson, McDowelle, & Wilson, 1993).

Rational Choice theory was developed originally by economists and philosophers and is a very large field with vast literature (Martin, 1993). Rational choice theory has become one of the primary currents in American political science in the last several decades and the influence of the theory has impacted all social scientists (Hauptmann, 1996). Traditionally, Rational Choice is represented as the selection of an optimal solution to a problem. A rational choice is held to be one in which the following elements are present.

1. There is a feasible set of actions that can lead to the desired end.
2. The consequences of each action can be assessed as possessing outcomes that are characterized by certainty, quantifiable risk, or uncertainty.
3. The feasible set of actions are ranked according to the probability what they will result in the desired outcome.
4. The participant chooses the alternative that has the best chance of satisfying their desires. (March & Simon, 1958; Elster, 86; Slote; 89).

In other words, to act rationally simply means to choose the highest-ranking element in the feasible set (Elster, 1986 p4). However, this seemingly clear simplicity is

misleading. The model assumes that the feasible set of actions can be identified, but does not consider how a participant might do this.

However it is argued that Rational Choice theorists both idealize consumer choice and neglect defining features of political choice. Consumers choices are not are not always untroubled expressions of authentic preferences; people's choices in politics do not resemble their choice in market goods by the structure of how they choose nor the items they select. Rational choice theorists declare the formation of preferences to be outside the bounds of their theory. Rational choice theorists do not believe that analyzing people's choices teaches us any sort of moral lesson, apart from one about the importance of squaring our ideals with what is possible. More importantly, rational choice theorists set few limits on choosing, many claiming that we choose even when we are passive or impulsive. Given this unbounded understanding of choice, rational choice define their theoretical mission as explaining why, even when our choices are impeccably rational, the choices we make as individuals do not impart their rationality to our collective choices.

Using the Rational Choice framework to consider parents reaction to being unhappy with their children's schools, it is assumed parents know all of the options. Secondly, it is unlikely that any participant could have access to the entire range of feasible actions. For parents considering their child's participation in choice, may not have resources to send their children to a private school, which means their range of choices is limited. It is more likely that each participant will deliberately limit the number of alternatives in order to make the potential set of actions manageable. All participants are likely to create their own "definition of the situation" (March & Simon,

1958; p 139). By limiting the options they investigate, they may miss information needed to fully understand every possible option. For example, by not pursuing private schools, because they assume they do not have the financial resources to pay for it, parents may miss information about a voucher system that may pay for part or all of the cost of attendance at a private school. It is only when the outcomes are certain that a choice can be called fully rational. The challenge for parents selecting a school is they have many desired outcomes, but limited certainties. Although rationality is assumed to be an important characteristic of human behavior, it cannot be used to describe all activities. People may be stray from their goals based on emotional factors (Harsanyi, 1977) or they may fail to pursue any well-defined objectives altogether. Examples of factors that might frustrate rational behavior include indifference, incomplete preference ranking, choices under uncertainty, and the inability to know enough information has been collected.

Individual action is not solely the product of intentions. It is also subject to constraints that derive from at least two independent sources. The first set of constraints is due to a scarcity of resources. Differential possession of and access to resources make some ends easy for some individuals to attain, some more difficult, and preclude the attainment of others altogether. On account of scarcity, actors will not always choose the course of action that satisfies their most valued ends. Social institutions can be a second source of constraints. Individual's actions are checked from birth to death by familial and school rules; laws and ordinances; firm policies, and churches. By restricting the feasible set of courses of action available to individuals, enforceable rules of the game including norms, laws, agendas, and voting rules--systematically affect social outcomes.

Types of school choice programs

Many different types of school choice programs have developed across the country. Parental preference has been an important factor in development of most choice plans. School choice programs can be grouped in two categories: limited or controlled school choice and full educational choice. Most forms of controlled choice include intra-district choice, inter-district choice, and charter schools (Bierlein, 1993).

Limited/Controlled Choice

Intra-district choice

In an intra-district school choice plan, school assignment is not restricted to one particular school within the geographic boundaries in which a child resides. Families may choose from magnet schools, alternative schools and open enrollment. Most intra-district choice plans leave intact the existing neighborhood school attendance areas; that is, children of families in a school's attendance zone are assigned to that school unless their parents choose another school. In addition, students from an outside neighborhood may not displace resident students in neighborhood schools. Intra-district schools of choice share some common characteristics. Each operates under the authority and control of the district's central administration and depend on the district for their operating revenue (Association for Supervision and Curriculum Development, 1997).

Magnet schools

Magnet schools are district-operated schools designed to attract a racially diverse student body. These schools offer alternatives to the traditional curriculum and typically have one of more of the following characteristics: 1) a curriculum designed around a theme or a method of instruction; 2) a selected student population and teaching staff; and

3) students drawn from a variety of attendance areas. Admission procedures for magnet schools vary from district to district. In some cases the admission process includes accepting students on a first-come, first-served basis; seats allocated for racial balance; in other schools, a lottery is used. What distinguishes magnet schools from other categories of intra-district choice is the decision by the district to limit choice to a small number of schools that have additional resources not available to other schools (Brouillette, 2001).

Alternative schools

Alternative schools were designed for students who, for a number of reasons, do not function well in traditional schools. These schools typically serve students who have dropped out of school or who are in danger of dropping out to underachievement, pregnancy, low skills, or drug or alcohol dependency. Alternative schools differ from traditional educational programs in organizational structure, size, and curricular offerings. These schools seek to keep students in school by providing an alternative to traditional school (Brouillette, 2001).

Open enrollment

Open enrollment allows families to send their children to any school offering the appropriate grade level and capacity within their school district. The amount of space available for students outside the attendance area is usually limited because districts continually redraw attendance areas to use available building space efficiently. While many districts try to provide provisions for open enrollment, parents often are responsible for transportation.

Inter-district choice

Inter-district choice typically allows families to send their children to any government school in the resident state or region, subject to the following restrictions:

(a) the receiving district agrees to accept the nonresident students; (b) available space exists with the receiving district's school; and (c) the transfer will not adversely affect desegregation mandates.

Charter schools

Charter schools are new kinds of government schools that operate as schools of choice. Unlike traditional government schools, no students are assigned to charter schools on the basis of the neighborhoods in which they live. Charter schools rely solely on voluntary choice for their enrollment. Charter schools receive a per pupil amount from state funding based on the number of students they are able to attract. In addition charter schools rely on funds raised from external sources. In general, charter schools can be defined as government sponsored autonomous schools, substantially deregulated and free of direct administrative control by the government. Charter schools are typically exempt from some rules and regulations that apply to district-operated schools with control of their own budget and staffing, but not including standards related to health and safety and public accountability and nondiscrimination.

Full educational choice

Full educational choice removes barriers that parents face when choosing among all schools, including private ones. The most significant barrier is usually tuition.

All taxpaying parents must pay for government school for their children through

their taxes, so parents who choose tuition charging private schools in effect must pay twice for education. This seeming financial penalty prohibits many parents from being able to afford a private school of choice for their children. Full education choice programs seek to offset this financial penalty to parents in whole or part. The majority of full educational choice programs fit into one of four categories: vouchers, private scholarships, tax credits, and universal tax credits.

Vouchers

Vouchers are simply direct payments from the government to individuals to enable them to purchase a particular good or service--in this case, education --in the open market. Payment of a government-funded voucher may be accomplished in a number of ways: directly to parent, who then pays the school; prepayment in advance of services rendered; redeemable certificates distributed to parents and cashed by the school or in the form of a two-party check to be endorsed by both the parent and the school. Vouchers can be issued to cover all educational expenses or one or more categories such as tuition, transportation, or special education. Voucher plans are the primary type of choice models based on parental control. In this model, all or part of the cost of educating a student is given to parents to use for admission to other public and or private schools.

Tax credits

Tax credits are designed to provide parents with tax relief linked to expenses incurred in selecting an alternative government or private school for their children. A tax credit is a dollar-for-dollar reduction in taxes owed, whereas tax deduction is merely a reduction in taxable income. Tax credits are typically applied to state and/or federal income taxes, but property tax credits have been proposed as well. For the purpose of

school choice, tax credits might be allowed for any or all out-of-pocket educational expenses incurred by an individual, from tuition to textbooks to transportation to extracurricular fees--though tuition is the most common expense allowed in this practice.

Although both vouchers and traditional tuition tax credits could be used to eliminate the problem of forcing parents of private school students to bear the full cost of both tuition and school taxes, both proposals have disadvantages. Vouchers, for example, are subject to allegations that they drain funds from government schools, permit state funds to be used to support religious schools and will create a new type of entitlement program, while inviting over regulation of private schools. Traditional tuition tax credits that only allow parents to receive the tax credit address some of the problems with vouchers, but fail to help low income and many middle income families who lack enough tax liability to benefit from a tax credit (Anderson, Overton, Wofram, 1997).

Private scholarships and universal tuition tax credit

Private scholarships offer parents the opportunity to choose the best school for their children through tuition assistance from private sources rather than from government. Most private scholarships offered around the nation cover only a portion of private school tuition. Universal tuition tax credits developed by Mackinac Center for Public Policy in 1997 expanded choice in Michigan. The universal tuition tax credit allows any taxpayer individual or corporate, to contribute to the education of any Michigan elementary or secondary child and receive a dollar for dollar tax credit against taxes owed. The universal tuition tax credit is limited to one-half the amount that the government allots each school per pupil (Anderson, Overton, Wofram, 1997).

Reasons parents engage in choice

As demonstrated by choice theories, there are different perspectives used when considering how people make choices. There are also many reasons parents cite for engaging in school choice. Most parents consider their child's happiness as a primary and highly influential factor. However, some indication existed that parents wanted choice even when they were generally pleased with their child's assigned school. A parent satisfaction survey in Michigan revealed that while only 10.2% of parents reported negative feelings about their child's school, 23.8% of the same group indicated that, given the option, they would place their child in a school other than the one they currently attended (Michigan Department of Evaluation Services, 1996). Alves (1987) found that 40% of parents selected schools based on convenience, 20% due to academic offerings, and 6% for extra curricular or social reasons. Additionally, good discipline seems to be highly rated. While the literature suggests parents take into account numerous factors when making decisions about preferred schools, parents often give vague and imprecise reasons and each factor may mean something different for each parent. For example, "school reputation" is very difficult to quantify, as are "good teachers" and "good discipline" (Martin, 1993). It has been suggested that parents who name good discipline as an important school characteristic do so because they assume that the maintenance of order in schools means the required attention can be given to instruction, thus impacting exam grades (Martin, 1993). If this is the case, then good discipline as a factor is not easily separated from other school based criteria. Consequently, naming factors is only partially useful in gaining understanding of the selection process.

Characteristics of parents that engage in choice

Parents who are better educated and already involved in their children's education are more likely to seek participation in school choice programs (Fuller, 1996). For example, Cookson (1994) reported that educated parents are more likely to exercise choice than all others. Martinez, Goodwin, and Kemerer (1996) also found that choosing parents are more than twice as likely as non-choosing parents to have attended college. Studies of the voucher demonstration project in Alum Rock, California revealed that better educated parents were more likely to take advantage of the voucher demonstration project and actively engage in choosing schools (Bridge & Blackman, 1978). The evaluations of Milwaukee's limited choice program found that parents especially mothers, who participated in the program were better educated on average than parents who did not participate (Witte, 1991; Witte et al., 1992). Several studies also reveal that better educated parents are more likely to choose their schools. These surveys come from varied samples, including parents who sent their children to 75 independent neighborhood schools serving mostly African American families (Ratteray & Shujaa, 1987); parents in Minnesota, a state that allows parents to deduct a portion of the cost of sending their children to private schools (Darling-Hammond & Kirby, 1985); parents in Montgomery County, Maryland, who transferred their children either from public school to private school or vice versa (Frechtling & Frankel, 1982); and a national sample of parents questioned to determine how they choose schools and how a federal tuition tax credit might affect their choice (Williams, Hancher, & Hutner, 1983). In every case, better educated parents were more likely to participate in choice programs or otherwise select their children's schools.

It has also been found that there are considerable differences between the behavior and expectations of different groups of parents, and that ethnic background is sometimes an important variable in this respect (Hunter, 1991). However, other studies have reported that they found little difference between ethnic groups, but that significant differences in response were found between social classes (West, et al., 1993). Their findings suggest that parents with better jobs and education draw on a wider range of sources to inform their decisions and are less likely to choose a local school Schiller, Plank, and Schneider (1993). A three-year study of the Alum Rock Public Demonstration Project on open enrollment found that significant differences existed in family awareness of school and program choices. It was found that economically advantaged families had more and better information from which to make choices than did economically disadvantaged families (Young & Clinchy, 1992). Uchitelle (1977) also found that minority and low-income parents in a Midwestern school district were not as knowledgeable about the opportunities for choice as were their middle and upper income counterparts.

Findings from research on the link between income and school choice are suggestive, but mixed. Some evidence has indicated an inverse relationship between income and choice. Schiller, Plank, and Schneider (1993) concluded that low-income and minority families would take advantage of expanded choice if available. Darling-Hammond and Kirby (1985) and Strate and Wilson (1993) also found that low income parents had less options to consider as alternatives to local public schools, while upper income parents had less reason to have to consider alternatives because of their access to better schools. Lee, Croninger, and Smith (1994) also confirmed what other studies of

choice have found: Poor and minority families in school districts with a weak resource base favor school choice as an educational policy.

Several studies demonstrated the tendency among minorities to favor school choice (Lee, 1996; Schneider, Schiller, & Coleman, 1996) For example, Cookson (1994) and Witte, Bailey, and Thorn (1993) reported that minority parents are more likely to exercise the choice option than are white parents. Findings also suggest that white parents have more school choice options (Lee, 1996; Plank 1993; Strate, 1993). For example, Lee (1996) reported that because parents living in predominately white suburbs surrounding downtown Detroit do not share this negative view of their local schools, they feel much less urgency over school choice.

Several studies provide that gender plays an important role in school choice. West (1996) and Davis (1997) reported that more parents of girls than boys opt for single sex schools. Co-educational schools tended to be preferred more for sons than daughters. Similarly, Witte (1996) concluded that there are more female children than male children in studies of choice program in Milwaukee.

How Parents Choose

Parents' attitudes toward choice were affected by the resource base of the school districts, above and beyond parents' assessment of the quality of the schools (Lee, Croniniger, and Smith, 1994). An examination of findings from San Antonio's CEO Horizon Program, the Milwaukee Parental Choice Program and the Washington Scholarship Fund shows that the parents participating in school choice programs overwhelmingly define educational excellence in terms of three things: safety, discipline and instructional quality (Lee, Croniniger, and Smith, 1994).

Parents of the CEO Horizon Program in San Antonio, Texas were asked what factors they considered in choosing their children's school. Parents cited the following factors as very important: what is taught in class, 89%; teacher quality, 82%; discipline, 81%; safety, 73%; and academic quality, 77% (Martinez, Godwin, and Kemerer, 1996). The University of Wisconsin survey of parents participating in Milwaukee Parental Choice Program contains similar findings. Parents were asked to rate "issues and their importance in your decision to participate in the Choice program." The top four factors ranked as very important among choice program participants were: educational quality, 88%; teaching approach or style, 85%; discipline, 76%; general atmosphere, 74%. Applicants for the Washington Scholarship Fund also gave similar reasons for seeking a new school. Parents rated the following reasons as important: higher standards, 80%; better curriculum, 78%; better teachers, 55%; safer school, 45%.

West and associates (1993) found that the most important sources of information reported by parents were school visits, booklets, friends/neighbors, another child in the family, and local knowledge, but what was not determined was the influence that each of these sources had on the parent's final choices. West, et al. (1993) reported in their study of how parents choose, that almost all of the parents had visited schools. However, more than half visited two or fewer. Additionally, almost a third of the parents claimed not to have read any brochures produced by school. It is possible that these parents already had perceptions about acceptable schools before the visits began. They were not investigating all potential schools, but had limited themselves to a small number they would study in detail.

Outcomes Related to Choice

It has been difficult to attribute school outcomes, such as student achievement, dropout rates, suspensions, student satisfaction, and parent satisfaction, solely to choice. The same issues that supported development of choice initiatives generally trigger other, concurrent improvement efforts. Research on choice outcomes could demonstrate associations among variables but could not draw conclusions about cause and effect. Raywid's (1984) comprehensive review of research on alternative schools revealed that the schools seemed to be distinguished by a clear sense of purpose, a shared sense of values, high morale among teachers and students, parental satisfaction, and a perception among teachers of higher achievement. In addition, results of recent research suggested that school choice might contribute to improved achievement (Gameron, 1996; Algozzine, et.al., 1999; West, 1996), decreased student violence (Barr & Parrett, 1981), and greater student and parent satisfaction (Siebold & Jundson, 1996).

Several other promising findings have been associated with school choice. A study of 120 districts nationwide yielded evidence that choice programs led to higher academic achievement, higher graduation rates, more parental satisfaction, and higher teacher morale (Fiske, 1991). Parents of children in choice programs have been found to be more involved with their children's academic programs and extracurricular activities than groups of parents they have been compared to that do not participate in choice programs (Vassallo, 2000). A study conducted by Metcalf (1999) found that Cleveland scholarship students showed a small but statistically significant improvement in achievement scores in language and science. The researchers found that the program effectively serves the population of families and children for which it was intended and

developed, and that the majority of the children who participated in the program were not likely to enroll in the private school without a scholarship. The study also found that scholarship parents' perceptions of and satisfaction with their children's schools were substantially improved. Similarly, a June 1999 survey conducted by Harvard reveals that parents participating in Cleveland's voucher program were more satisfied with many aspects of the schools they chose than were parents with children still in public schools (Vasallo, 2000). A study released in by Buckeye institute argues that school choice in Cleveland has provided better racial integration than the Cleveland public school system (Vasallo, 2000).

In March 2000 the Children's Educational Opportunities Foundation released its findings on San Antonio's Horizon program, the nations' first fully funded private voucher program offered to all parents in an entire district. Peterson (1999) found that that the program did not lead to an exodus of from the public schools. And nearly every scholarship applicant was accepted at a school of choice, this refuting arguments that private schools would pick only the best students. Another development in school choice research (Witte, 2000 p.7) finds that choice to be a "useful tool to aid low -income families".

It is difficult to use attendance and retention alone as indicators of successful school choice programs, because groups that have been served in choice programs traditionally have high mobility rates (Vasallo, 2000). The Milwaukee Parental Choice Program has existed more than a decade and provides some outcome data related to choice program attrition. A recent evaluation of the program by the nonpartisan Legislative Audit Bureau states that measuring student achievement is difficult mainly

because comparable control groups within the district are difficult to identify. However, the study concludes "available data indicate that most participating choice schools experienced relatively few student departures during the school year" (Legislative Audit Bureau, 2000 p. 9). However, the study of the Milwaukee Parental Choice Program found that choice students are more likely to attend the same school next year than are the members of the control group by 10% (Peterson, Myers, & Howell, 1999).

The San Antonio program also shows statistically significant higher retention rates among choice students than public school students. Of the total enrollment, of the Horizon students 93% attended the same school from the beginning of the year compared with 84 % of public schools students. In addition, 90% of Horizon students planned to attend the same school next year compared to 79% of public school students (Peterson, Myers, Howell, 1999). The Cleveland Scholarship Program, the Washington Scholarship Fund, and the Dayton PACE Program all had excellent school year retention figures, as did the groups to which they were compared.

Taken together, the studies show that choice schools tend to have student retention rates that are at least equal to and often significantly higher than those of non-choice schools. This suggests that schools of choice tend to satisfy parents and students better than do non-choice schools. Parent satisfaction seems to be a particularly vital outcome of school choice. Although by itself is unlikely to produce better schools, it provides a measure of responsibility to parents, and often does increase satisfaction with and reinforce support for public schools (Halstead, 1994; Thernstrom, 1991). In 1991 the Task Force on Parent Involvement and Choice appointed by The National Governors' Association concluded that, while talking about the need for parent involvement in and

support of local public schools, “a majority of local systems/schools are designed and operated in ways that effectively exclude parents from any meaningful voice in the education of their child” (p. 57).

An important outcome for choice schools may have resulted from increased information offered to parents. This information may have come about ostensibly to provide the data necessary to make informed choices but may also have affected school accountability. In a market-driven economy, schools provide the kinds of services students and parents want. Private schools have the capacity to cater and adjust to their customers’ needs and interests. Public schools of choice are, to some extent, drawn into this process of natural selection that complemented marketplace incentives in propelling and supporting a population of autonomous, effectively organized schools. Choice tended to give parents a greater sense of ownership and commitment and may have kept schools from becoming too complacent (Chubb & Moe, 1990, Uchitelle, 1997).

There is mounting evidence that both students and parents tend to be more satisfied with a school that they voluntarily select. The act of selecting a school may have made parents more aware of benefits that would otherwise go unnoticed (Erickson, 1982; Task Force on Parent Involvement and Choice, 1991). Some findings suggest that school choice enhanced parent satisfaction over an assigned school, even when achievement data showed no differences (Cookson, 1994; Bomotti, 1998). Parent satisfaction, reflected by parent pressure to expand programs, was documented as rising after one’s child enters a choice program (Witte, 1996). Choice could support other reform efforts by enhancing parental satisfaction with the school and its educational program (Rasell & Rothstein, 1993; Smith, 1997).

Given the importance of parental involvement in improving schools and individual student performance, researchers have examined various methods of improving parental involvement. Raywid (1984) concluded that when allowed to select from various programs, parents were much more satisfied and often more involved in their child's education. Several studies demonstrate that parents who are dissatisfied with their children's schools are indeed more likely to select another school. The findings of first and second year evaluations of Milwaukee Public Schools Parental Choice Program which enables low income families to send their children to private schools at district expense, indicate that choice parents tended to be less satisfied with their children's previous schools than non-choice parents (Witte, 1991; Witte, Bailey, & Thorn, 1992). Similarly, surveys conducted in Minnesota (Darling-Hammond & Kirby, 1985) and Montgomery county (Freechtling & Frankel, 1982) revealed that parents who were active school choosers were more likely to be dissatisfied with their children's schools.

The uniformity of the twentieth century system of public education has been seen as unresponsive to both students and teachers. Current conditions related to the growing achievement gap have strengthened the desire of parents and districts to see improvements and enhancement of educational offerings and programs. Choice is considered a solution to the issues that are negatively impacting schools. Choice has been reported to increase educational effectiveness and opportunity (Martin, 1993). Choice has proven to be a useful tactic in promoting urban public education transformation and experimentation, as well as creating options for parents.

In the following study parents' choose to allow their children to attend their base school or transfer to a non-specialty school. Parents desired result of school is for their

children to be happy (Martin, 1993) while making positive academic gains. According to the principles of the Rational Choice theory, when selecting a school parents would consider all feasible school options, rank them according to which ones best meet the needs of their children, and select the optimal school for their child's growth. In order to determine if the set of actions parents selected led to the desired end, the current study will conduct an investigation of academic outcomes of students that attend their base school and those that transfer to non-specialty schools.

CHAPTER 3

RESEARCH METHODS

In response to the demands for quality and innovative schools, several choice options have been developed in school districts around the country. These schools have adapted to the changing needs of children and society (Ravitch & Viteritti, 1997). One such choice option that is available to families is controlled choice. Wake County Public School System allows parents the ability to transfer their child to any non-specialty school within the school system. This option allows families to select a school, other than the assigned base school, for any number of reasons.

This study is significant because it can serve as one point of measure for the benefits of allowing students to attend schools of choice, thereby validating the district's school choice options. It was anticipated that the students who attend non-specialty schools would have higher math and reading test scores, have fewer suspensions, and experience less remediation than the students that attended their base schools.

This chapter describes the methods used in conducting the research, including a description of the context of the study, description of the data, research design, data collection methods, variables studied, and data analyses conducted. This study will test some of the assumptions about parents choosing positively impacting student academic performance. The primary goal of this study was to determine if there are there differences in the educational outcomes of students choosing non-specialty and those who choose to remain at their base schools.

Several collateral issues arising from the primary question also will be addressed. They are as follows:

1. Are there differences in the standardized end-of -grade reading scores between students a choosing non-specialty and those who remain at their base schools?
2. Are there differences in standardized end-of grade math scores between students choosing non-specialty and those who remain at their base schools?
3. Are there differences in remediation rates between students choosing non-specialty and those who remain at their base schools?
4. Are there differences in suspension rates of students attending between students choosing non-specialty and those who remain at their base schools?
5. Are there significant demographic differences among variables that predict achievement for those students who choose non-specialty and those who remain at their base schools?

Context of Study

Created through the merger of the former Wake County Schools and Raleigh Public School Systems in July 1976, Wake County Public School System (WCPSS) serves the entire Wake county area including Apex, Cary, Fuquay-Varina, Garner, Holly Springs, Knightdale, Morrisville, Raleigh, Rolesville, Wake Forest, Wendell and Zebulon. WCPSS is currently the second largest school district in the North Carolina, the 27th largest in the country. The school system serves more than 101,000 students from kindergarten through 12th grade in 78 elementary schools, 24 middle schools, 15 high schools, and five special/alternative schools. The system also has a strong network of magnet schools that offers options for students and families, maximizes building capacity, and promotes racial diversity in all schools. The magnet program consists of 43 schools, offering a wide variety of programs including year-round, gifted and talented,

international baccalaureate, Montessori, creative arts and science, global communication, accelerated studies and other models.

In 1977 Superintendent John Murphy started the magnet program, but the bulk of the magnet schools started in 1982 under Walter Marks. He termed the magnet program 'Schools of Choice' program. In the mid 1980's Wake County started a task force study group to look ahead at where the county should be in 10 years in preparation for the huge growth that was expected in the district. One group studied the idea of year-round schools to gauge community interest and the educational soundness of such programs. After the study was complete, Wake County opened the first year-round school in North Carolina and the first year-round magnet program in the nation at Kingswood Elementary in 1989.

Each student enrolled in the Wake County Public School System is assigned to the school of his or her grade level serving the attendance area in which that student's parents or court-appointed guardian lives. Parents, with some exceptions, are allowed to transfer their child to any non-specialty school within the school system. Exceptions are made as necessary to limit enrollment of a school due to overcrowding, to control enrollment diversity, or for special programmatic reasons; e.g., special education, English as a Second Language, or alternative school programs. Each student has the option of applying for admission to one of the magnet educational programs or year-round programs, which are offered in designated schools.

Research Design

This non-experimental comparative study was conducted with existing school data. This study compares end-of-grade test scores, demographics, and academic

outcome variables of students attending base schools with students attending non-specialty transfer schools. Data from Wake County School System were appropriate for use in this study because they allow students to transfer to non-specialty schools. The transfer option, with some restriction, allows students in the district to transfer to other schools in the district. The data obtained and examined in this research span over three academic years, 1998-2000. The variables are defined and reported by the Wake County Public Schools System Office of Evaluation and Research. The Wake County Public Schools System compiled the data set containing all demographic and outcome variables for this study.

Due to the multiple data sources and data management tools, variables related to grade point averages could not be obtained to include in this study. Still, a number of variables demonstrating academic performance are included. The variables include math and reading end-of-grade scale scores, suspensions, and remediation. The selection of variables to measure in a research project is determined by the definition of the problem to be addressed and the question posed for investigation. In the present study, the impact of parental controlled choice on academic performance are assumed to be significant. The variables considered initially are:

- Gender
- African American student enrollment (1997-2000): Grades 6-8
- White student enrollment (1997-2000): Grades 6-8
- Hispanic student enrollment (1997-2000): Grades 6-8
- Native American student enrollment (1997-2000): Grades 6-8
- Multi racial student enrollment (1997-2000): Grades 6-8
- Free/Reduced Lunch Status of students (1997-2000): Grades 6-8
- End Of Grade scale scores reading (1997-2000): Grades 6-8

- End of Grade scale scores math (1997-2000): Grades 6-8
- Suspensions (1997-2000): Grades 6-8
- Remediation (1997-2000): Grades 6-8
- Number of Students attending base middle schools (1998-2000): Grades 6-8
- Number of transfer middle school students (1998-2000): Grades 6-8

Data Description

The data reviewed above form the bases for the consideration of the variables examined in this research. After careful consideration, some variables remained unchanged, while others were excluded from the analysis based on the integrity of the data. Ultimately, the operational variables were assigned to one of two categories: demographic and academic outcomes. The demographic variables include:

- Gender
- African American student enrollment (1997-2000): Grades 6-8
- White student enrollment (1997-2000): Grades 6-8
- Hispanic student enrollment (1997-2000): Grades 6-8
- Number of students attending base middle schools (1998-2000): Grades 6-8
- Number of students attending transfer middle schools (1998-2000):
Grades 6-8
- Number of students receiving free/reduced lunch: Grade 6-8

Academic outcome variables include:

- End Of Grade scale scores reading (1997-2000): Grades 6-8
- End of Grade scale scores math (1997-2000): Grades 6-8
- Suspensions (1997-2000): Grades 6-8
- Remediation (1997-2000): Grades 6-8

Table 1

Total Sample Demographic Characteristics (N=2,898)

Variables	N	%
Gender		
Male	1467	50.6%
Female	1431	49.4%
Ethnicity		
American Indian	6	.2%
African American	616	21.3%
Asian	74	2.6%
Hispanic	67	2.3%
Multi	19	.7%
White	2116	73%
Free/Reduced Lunch Status		
Free	367	12.6%
Reduced	113	3.9%

Table 2

Base School Sample Demographic Characteristics (N=2800)

Variables	N	%
Gender		
Male	1384	49.4%
Female	1416	50.6%
Ethnicity		
American Indian	4	.1%
African American	580	20.7%
Asian	68	2.4%
Hispanic	56	2.0%
Multi	18	.6%
White	2074	74.1%
Free/Reduced Lunch Status		
Free	343	12.3%
Reduced	105	3.8%

Table 3

Transfer School Sample Demographic Characteristics (N=98)

Variables	N	%
Gender		
Male	47	48.0%
Female	51	52.0%
Ethnicity		
American Indian	2	2.0%
African American	36	36.7 %
Asian	6	6.1%
Multi	1	1.0%
White	42	42.9%
Free/Reduced Lunch Status		
Free	24	24.5%
Reduced	8	8.2%

Data Collection Methods

The Information Systems Department of the Wake County School System provided the demographic and academic data. Each school collects demographic data on each of its students. The data is entered and maintained in a system called SIMMS. The data is submitted to the school system and the school reports the aggregated data.

North Carolina End of Grade Tests

Two of the student outcomes will be measured by North Carolina End of Grade Tests (EOG) of Reading Comprehension and Mathematics. These tests were developed by the North Carolina Department of Public Instruction (NCDPI) with the technical support from the L.L. Thurstone Psychometric Laboratory, The University of North Carolina at Chapel Hill, and the North Carolina Technical Advisory Group. The EOG's are designed to measure how well students learned what they should have learned as specified by the North Carolina Standard Course of Study and to hold educators and policy makers accountable for student learning.

During the fall of 1990 and the spring of 1991, NCDPI personnel, university faculty members, and the NC Testing Commission established the specifications for each content area and grade level to be assessed with EOG tests. Two dimensions, difficulty level and thinking skill level, were used to classify items. Difficulty level describes how challenging items are and thinking level describes the cognitive skills that a student must use to solve the problem. The thinking skills framework used is from Dimensions of Thinking by Robert J. Moanzano and others (1998). A minimum of four reviewers reviewed all items. Differential item functioning was used to discard items that showed bias. The EOG tests were administered for the first time in May 1993.

The North Carolina EOG tests assess reading achievement by having students read passages and then answer questions directly related to passages. The mathematics tests assesses students abilities to in numeration, geometry, patterns and pre-algebra, measurement, problem solving, data analysis, and computation. The mathematics tests have 80 items that are administered in two parts. Both the reading and the math test yield scores can be categorized by four achievement levels: I, II, III, IV. Level I students demonstrate inadequate mastery of grade level skills. Level II students demonstrate inconsistent mastery of grade level skills. Level III signifies that the student is showing adequate preparation for the next grade level skills. Level IV shows that the student is performing in a superior manner clearly beyond grad level.

Table 4

NC End-of-Grade Test Developmental Scale Scores for Reading and Math 1997-2000

Grade	Level I	Level II	Level III	Level IV
<u>Reading</u>				
6	128-140	141-151	152-161	162-180
7	130-144	145-154	155-163	164-183
8	132-144	145-155	156-165	166-184
<u>Math</u>				
6	130-145	146-154	155-167	168-196
7	134-151	152-160	161-172	173-203
8	137-154	155-164	165-177	178-208

Analytic Techniques

Univariate and multivariate statistical analyses were conducted to examine each variable. Generated using the SPSS software package, univariate statistics—means, medians, standard deviations, ranges, and percentiles—are used to provide general descriptions of individual variables. Multivariate statistics—analysis of variance, multivariate analysis of variance, and linear regression analysis are used to describe general relationships among variables, generate scales, explain variability, and make inferences regarding the impact of choice.

The analyses used to answer the first specific question involved the use of MANOVA designs and Chi Square tests. Repeated measures MANOVA designs were used to assess the quantitative differences between groups in mean scale scores for reading and math across grades six, seven, and eight. Separate Chi Square tests were applied to performance levels to assess for differences between groups of students in reading and math across grades six, seven, and eight. The application of Chi Square tests for differences between groups assessed qualitative differences between each group. Quantitative differences between mean scale scores for math and reading (i.e., MANOVA), given the sample size, may not necessarily translate into qualitative differences between groups (i.e., Chi Square), thus explaining the need to consider both sets of analyses.

MANOVA and Chi Square were used to assess differences in remediation and suspension rates between students attending base schools and those that transfer to non-specialty schools. Since remediation is a categorical variable (i.e., a student was either held back a grade or not), Chi Square is the test of choice for differences between groups.

The variable Suspension Rate is the sum of the number days suspended for each year. While Suspension Rate is a continuous variable, the use of MANOVA is most appropriate for assessing quantitative differences in means between groups. Further examination using Chi Square tests between those students who have not been suspended in any of the three years and those that have, in order to assess for qualitative differences between groups. The final question was assessed using correlational and regression models. Separate correlation analyses among the variables in this study were conducted for each group to explore the differences between groups for reading and math scores across grades six, seven, and eight. Linear regression models were used to examine the predictability of certain variables on reading and math scores across grades six, seven, and eight.

Chapter Summary

This chapter presented the research design and methodology used in the study. Included was a list of variables considered for the analyses to determine if attending a school of choice has an impact on educational outcomes. Descriptions of the population studied and sampling techniques were provided. The chapter concluded with a presentation and discussion of the statistical methods used to analyze the data derived from the five research questions. Findings are discussed in Chapter 4.

CHAPTER 4

RESULTS

This study examines the impact of educational choice on academic outcomes. Previous chapters have introduced this study, presented a review of relevant literature, provided a theoretical base for this research, and detailed the methodology used to conduct this study. This chapter will present the results of all analyses. Findings from each research question are reported and explained.

Repeated measures Multivariate Analysis of Variance (MANOVA) tests were conducted to test for the effects of school and gender type as it relates reading and math scale scores across three years: a) sixth grade, b) seventh grade, and c) eighth grade. Chi-Square analyses were also conducted to examine group differences in reading and math levels across the same three years. The results of these analyses are presented by each research question.

Research Questions One and Two:

Are there differences in the end-of-grade (EOG) reading and math scores between students attending base schools and those that transfer to non-specialty schools?

Quantitative Differences (Multivariate & Univariate)

A significant effect for school type was noted on both reading and math scale scores in the repeated measures Multivariate Analysis of Variance (MANOVA) across the sixth, seventh, and eighth grade; $F(2,2733) = 4.53, p < .011$. A significant effect was also noted for gender on reading and math scale scores in the repeated measures MANOVA analyses across the sixth, seventh, and eighth grade; $F(2,2733) = 24.61, p < .001$. No significant interaction effects were noted.

Examination of univariate between subjects effects for school type on math and reading scale scores revealed that significant effects for both reading and math scale scores [$F_{\text{reading}}(1, 1203) = 8.29, p = .004$; $F_{\text{math}}(1, 2445) = 8.37, p = .004$]. Examination of univariate between subjects effects for gender on math and reading scale scores revealed that significant effects for reading scale scores, but not math scale scores [$F_{\text{reading}}(1, 3) = 0.01, p = .91$; $F_{\text{math}}(1, 2004) = 13.82, p < .001$].

As can be seen in Figure 1, mean scale scores for reading, holding gender constant, show that base school students had higher mean scores for each of the three years, in spite of the overall gains for both groups from grade 6 to grade 8. As can be seen in Figure 2, mean scale scores for math, also holding gender constant, show that base school students had higher mean scores for each of the three years, in spite of the overall gains for both groups from grade 6 to grade 8.

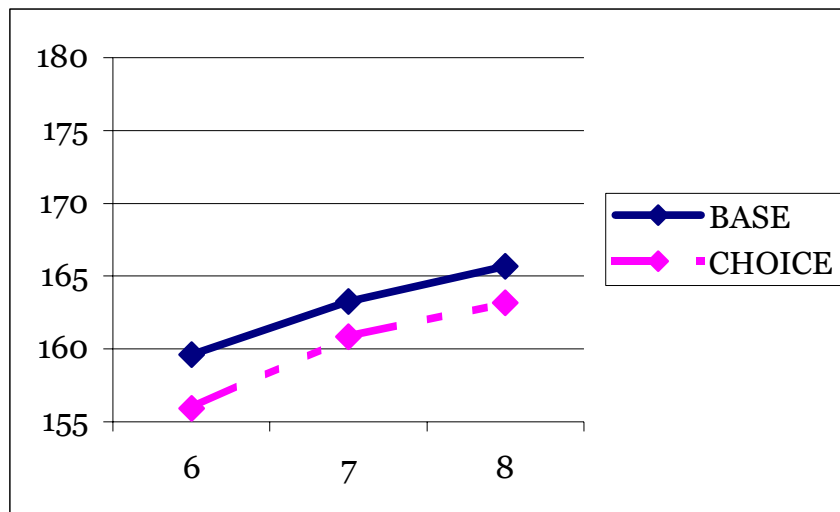


Figure 1. Reading Scale Score Means for Base and Transfer Schools Across Grades 6, 7, and 8

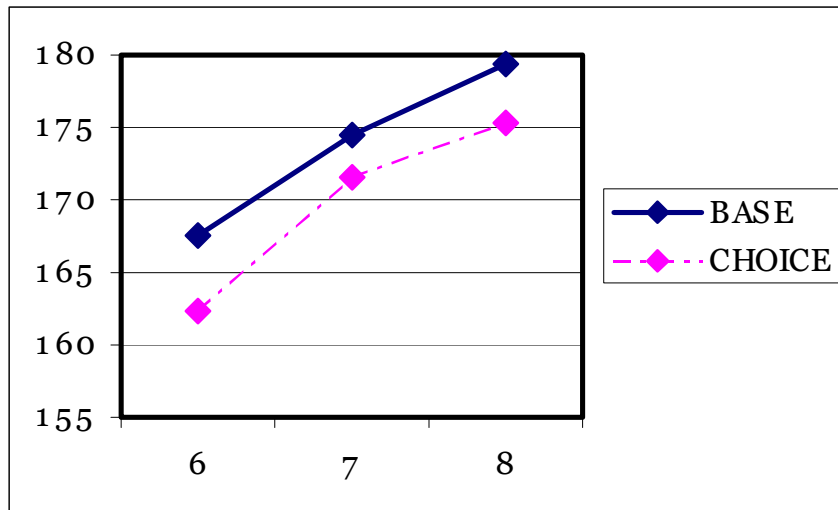


Figure 2. Math scale score means for Base and Transfer schools across grades 6, 7, and 8

Qualitative Differences (Chi-Square Analyses)

Separate Chi Square tests were conducted to examine differences between groups (base/transfer students) for reading and math levels across grades six, seven, and eight. Significant differences between school groups was noted for each of the three years [grade 6, X^2 (df,3) = 31.68, $p < .001$; grade 7, X^2 (df,3) = 16.74, $p = .001$; grade 8, X^2 (df,3) = 56.70, $p < .001$].

In each of these Chi-Square tables, the same patterns found in the MANOVA for differences between groups was noted. For the base group, the observed number of students in the highest reading levels exceeded the expected counts, while the observed number of students in the lowest reading levels fell short of the expected counts. For the transfer group, the observed number of students in the lowest reading levels exceeded the expected counts, while the observed number of students in the highest reading levels fell

short of the expected counts.

Separate Chi Square tests were conducted to examine between groups (base/transfer students) for reading and math levels across grades six, seven, and eight. Significant differences between school groups were noted for each of the three years [grade 6, X^2 (df,3) = 23.20, $p < .001$; grade 7, X^2 (df,3) = 16.22, $p = .001$; grade 8, X^2 (df,3) = 22.52, $p < .001$].

In each of the Chi-Squares (see Table 2), the same patterns as found in the MANOVA for differences between groups were noted as with reading levels. For the base group, the observed number of students in the highest reading levels exceeded the expected counts, while the observed number of students in the lowest reading levels fell short of the expected counts. For the transfer group, the observed number of students in the lowest reading levels exceeded the expected counts, while the observed number of students in the highest reading levels fell short of the expected counts. In summary, both quantitative and qualitative differences between school groups (i.e., base/choice) were noted for both reading and math.

Table 5

Chi-Square for Base and Transfer Schools at Grades 6, 7, and 8

Level	<u>Reading School Group</u>		<u>Math School Group</u>	
	Base	Choice	Base	Transfer
<u>Grade Six</u>				
One	(obs) 72	8	58	5
	(exp) 79	2	62	1
Two	(obs) 404	6	302	12
	(exp) 402	8	308	6
Three	(obs) 1014	21	985	20
	(exp) 1016	19	986	19
Four	(obs) 1265	17	1402	16
	(exp) <u>1258</u>	<u>24</u>	<u>1391</u>	<u>27</u>
Total	2755	52	2747	53
<u>Grade Seven</u>				
One	(obs) 37	3	54	4
	(exp) 39	1	57	1
Two	(obs) 259	12	206	10
	(exp) 266	5	212	4
Three	(obs) 1019	18	849	15
	(exp) 1017	20	847	17
Four	(obs) 1432	22	1635	27
	(exp) <u>1426</u>	<u>29</u>	<u>1629</u>	<u>33</u>
Total	2747	55	2744	56
<u>Grade Eight</u>				
One	(obs) 31	7	50	4
	(exp) 37	1	53	1
Two	(obs) 206	10	252	10
	(exp) 211	5	256	6
Three	(obs) 1072	21	863	29
	(exp) 1069	24	872	20
Four	(obs) 1457	23	1598	19
	(exp) <u>1448</u>	<u>32</u>	<u>1581</u>	<u>36</u>
Total	2766	61	2763	62

Research Question Three:

Are there differences in remediation rates between students attending base schools and those that transfer to non-specialty schools?

A Chi Square test was conducted to examine differences between groups (base/transfer students) for remediation (no/yes). No significant difference between school groups was noted for remediation [X^2 (df,1) = 2.03, $p = .154$].

Table 6

Chi-Square for Base and Transfer Schools by Remediation

<u>Remediation</u>		<u>School Group</u>	
		<u>Base</u>	<u>Choice</u>
No	(obs)	2611	51
	(exp)	2612	49
Yes	(obs)	104	0
	(exp)	<u>102</u>	<u>2</u>
Total		2755	51

Research Question Four:

Are there differences in suspension rates between students attending base schools and those that transfer to non-specialty schools?

No significant effects for school grade were noted on either yearly suspension rates for grades six, seven, and eight in the repeated measures Analysis of Variance (ANOVA) [F (2,2891) = 0.29, $p = .75$] or the Univariate ANOVA conducted on the sum of all three years of suspension rate [F (1,2892) = 1.27, $p = .26$], though there was a

significant effect for gender [$F(1,2892) = 22.08, p = .018$] and a significant interaction effect [$F(1,2892) = 5.63, p = .018$].

As can be seen in Figure 3, the means for days suspended differ for each group in that the mean for girls in Base schools is higher than the mean for girls in the Transfer schools, such that girls in Transfer schools approaches zero. Boys, on the other hand, have just the opposite effect in that boys in the Base schools have lower means than Boys in Transfer schools. It is also true that the boys have higher means than girls in both schools.

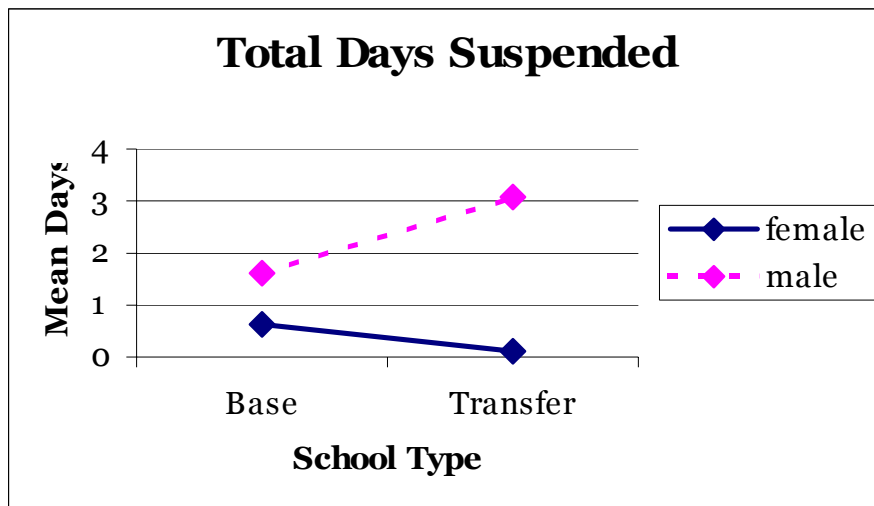


Figure 3. Chi-Square for Base and Transfer Schools by Suspension

Chi Square tests were conducted to examine differences between groups (base/transfer students) for suspension rates (none/one or two/greater than two). No significant differences between school groups was noted for suspension rate [$X^2(df,2) = 2.03, p = .362$], even when separate Chi-Square analyses were conducted for each gender.

Research Question Five:

Are there significant demographic differences among variables that predict achievement for those students who choose non-specialty and those who remain at their base schools? The final question was assessed using regression models. Predictor variables in this set of analyses consisted Ethnicity, Reduced or Free Lunch participation (no/yes), and Gender. Each of the variables was regressed on Reading and Math Scale Scores for each year (sixth, seventh, and eighth grades), Days Suspended Group (none/one or two/more than two), and Remediation (no/yes).

No significant main effects were noted for independent variables in regression models predicting Reading Scale Scores for Transfer students across grades six, seven, and eight. Significant main effects were noted for independent variables in regression models predicting Reading Scale Scores for Base students in grades six and eight: [F = 15.328, $p < 0.001$, $R^2 = .086$; F = 8.837, $p < 0.001$, $R^2 = .051$]. No significant main effects were noted for independent variables in regression models predicting Math Scale Scores for Transfer students across grades six, seven, and eight. Significant main effects were noted for independent variables in regression models predicting Math Scale Scores for Base students in grades six, seven, and eight: [F = 6.671, $p < 0.001$, $R^2 = .040$; F = 11.104, $p < 0.001$, $R^2 = .065$; F = 9.604, $p < 0.001$, $R^2 = .056$].

No significant main effects were noted for independent variables in regression models predicting Suspensions for Transfer or Base students across grades six, seven, and eight. There were no Remediation cases reported for Transfer students. Significant main effects were noted for independent variables in regression models predicting Remediation for Base students in grades six and eight: Ethnicity [F = 6.050, $p < 0.001$, $R^2 = .038$]

Table 7

Regression of EOG Reading Scores of Transfer Students on Demographic and Academic

Outcome Variables

Variable	t	Beta	p-value
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Grade 6

Ethnicity	-.393	-.113	.702
Gender	-.067	-.019	.948
Free/Reduced Lunch	-1.240	-.365	.241

Model

$R^2 = .133$

$F = (.562), p < .651$

Grade 7

Ethnicity	-.855	-.220	.407
Gender	.509	.133	.618
Free/Reduced Lunch	-1.601	-.438	.132

Model

$R^2 = .162$

$F = (.904), p < .464$

Table 7
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	-.946	-.210	.357
Gender	-1.184	-.275	.252
Free/Reduced Lunch	-.294	-.069	.772
<u>Model</u>			
$R^2 = .127$			
$F = (.870), p < .475$			

Table 8

Regression of EOG Math Scores of Transfer Students on Demographic and Academic

Outcome Variables

Variable	t	Beta	p-value
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Grade 6

Ethnicity	.195	.049	.848
Gender	-.872	-.218	.400
Free/Reduced Lunch	-1.714	-.437	.112

Model

$R^2 = .112$

$F = (1.633), p < .234$

Grade 7

Ethnicity	.209	.054	.838
Gender	.317	.081	.756
Free/Reduced Lunch	-1.229	-.332	.238

Model

$R^2 = .114$

$F = (.645), p < .598$

Table 8
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	-.593	-.130	.560
Gender	.174	.039	.863
Free/Reduced Lunch	-1.414	-.322	.174
<u>Model</u>			
$R^2 = .104$			
$F = (.734), p < .544$			

Table 9

Regression of Suspension of Transfer Students on Demographic and Academic Outcome Variables

Variable	t	Beta	p-value
<u>Grade 6</u>			
Ethnicity	-.546	-.097	.589
Gender	1.036	.182	.308
Free/Reduced Lunch	-.422	-.075	.676
<u>Model</u>			
R ² = .046			
F= (.500), <i>p</i> < .685			
<u>Grade 7</u>			
Ethnicity	-.125	-.022	.901
Gender	1.007	.178	.322
Free/Reduced Lunch	.149	.027	.882
<u>Model</u>			
R ² = .033			
F= (.347), <i>p</i> < .791			

Table 9
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	.532	.094	.599
Gender	1.384	.240	.176
Free/Reduced Lunch	.277	.049	.783
<u>Model</u>			
$R^2 = .067$			
$F = (.746), p < .533$			

Table 10

Regression of EOG Reading Scores of Base Students on Demographic and Academic

Outcome Variables

Variable	t	Beta	p-value
<u>Grade 6</u>			
Ethnicity	6.327	.274	.000
Gender	-.108	-2.497	.013
Free/Reduced Lunch	1.134	.049	.257

Model

$R^2 = .086$

$F = (15.328), p < .001$

Grade 7

Ethnicity	.195	.049	.848
Gender	-1.297	-.057	.195
Free/Reduced Lunch	.384	.017	.702

Model

$R^2 = .072$

$F = (12.539), p < .001$

Table 10
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	.195	.049	.848
Gender	-.076	-1.719	.086
Free/Reduced Lunch	.030	.001	.976
<u>Model</u>			
R ² = .046			
F= (8.837), <i>p</i> < .001			

Table 11

Regression of EOG Math Scores of Base Students on Demographic and Academic

Outcome Variables

Variable	t	Beta	p-value
<u>Grade 6</u>			
Ethnicity	4.412	.197	.000
Gender	-.884	-.039	.377
Free/Reduced Lunch	.322	.014	.748

Model

$R^2 = .040$

$F = (6.671), p < .001$

Grade 7

Ethnicity	5.719	.253	.000
Gender	.198	.009	.843
Free/Reduced Lunch	.533	.023	.595

Model

$R^2 = .059$

$F = (11.104), p < .001$

Table 11
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	5.358	.237	.000
Gender	-.100	.004	.921
Free/Reduced Lunch	-.125	-.006	.900
<u>Model</u>			
$R^2 = .050$			
$F = (9.604), p < .001$			

Table 12

Regression of Suspensions of Base Students on Demographic and Academic Outcome Variables

Variable	t	Beta	p-value
<u>Grade 6</u>			
Ethnicity	-1.300	-.057	.194
Gender	2.213	.101	.021
Free/Reduced Lunch	-.478	-.021	.633
<u>Model</u>			
$R^2 = .007$			
$F = (2.275), p < .079$			
<u>Grade 7</u>			
Ethnicity	-1.872	-.081	.062
Gender	2.648	.115	.008
Free/Reduced Lunch	-2.349	-.102	.019
<u>Model</u>			
$R^2 = .029$			
$F = (5.095), p < .002$			

Table 12
continued

Variable	t	Beta	p-value
<u>Grade 8</u>			
Ethnicity	.532	.094	.599
Gender	1.633	.072	.103
Free/Reduced Lunch	-.265	-.012	.791
<u>Model</u>			
$R^2 = .006$			
$F = (1.065), p < .364$			

Table 13

Regression of Remediation of Base Students on Demographic and Academic Outcome Variables

Variable	t	Beta	p-value
Ethnicity	-2.734	-.125	.006
Gender	2.905	.133	.004
Free/Reduced Lunch	-1.784	-.081	.075

Model

$$R^2 = .038$$

$$F = (6.050), p < .001$$

Table 14

Summary Table of Research Findings

<u>Research Question</u>	<u>Test</u>
<p><u>Research Question 1</u> Are there differences in the standardized end-of–grade reading scores between students attending base schools and those who transfer to non-specialty schools?</p> <p><u>Results</u> Base school students had higher reading mean scores for each of the three years. Both quantitative and qualitative differences between school groups (base/choice) were noted for reading.</p>	<p>MANOVA</p> <p>Chi square</p>
<p><u>Research Question 2</u> Are there differences in the standardized end-of–grade math scores between students attending base schools and those who transfer to non-specialty schools?</p> <p><u>Results</u> Base school students had higher math mean scores for each of the three years. Both quantitative and qualitative differences between school groups (base/choice) were noted for math.</p>	<p>MANOVA</p> <p>Chi square</p>
<p><u>Research Question 3</u> Are there differences in remediation rates between students attending base schools and those who transfer to non-specialty schools?</p> <p><u>Results</u> No significant differences between school groups was noted for remediation.</p>	<p>Chi square</p>

Table 14
continued

<p><u>Research Question 4</u> Are there differences in suspension rates between students attending base schools and those who transfer to non-specialty schools?</p> <p><u>Results</u> Suspension for girls in Base schools is higher than the mean for girls in the Transfer schools. Boys in the Base schools have higher rates of suspensions means than Boys in Transfer schools. Boys have higher rates of suspensions than girls in both school types.</p>	<p>ANOVA</p>
<p><u>Research Question 5</u> Are there significant demographic differences among variables that predict achievement for those students who choose non-specialty schools and those who remain at their base schools?</p> <p><u>Results</u> There were no significant demographic differences predicting achievement for students who attended Transfer schools.</p> <p>There were significant ethnicity and gender differences that predicted achievement for students who attended Base schools.</p>	<p>Linear Regression</p>

Summary

Student academic outcomes are considered to be a measure of a schools success (Vassallo, 2000). This chapter reported the findings of the impact of educational choice on academic outcomes. Each of the research questions was addressed using quantitative analysis. Chapter 5 discusses and interprets these findings. In addition to the explanation of the findings, policy recommendations will be made. Items to be considered for further research will be suggested.

CHAPTER 5

DISCUSSION

While the public has reported being generally pleased with schools, they have still sought improvements (Phi Delta Kappa, 1999). There has been a strong argument that combining free market characteristics with public school education will increase school choice options. While there has been opposition to this notion, it is difficult to argue against providing more options to families. This study examined the impact of choice on educational outcomes. This chapter provides a discussion of the study findings and conclusions. Policy implications and recommendations for further research are discussed.

Summary of Study

This non-experimental, comparative study was conducted with existing middle school data. This study compares end-of-grade test scores, demographics, and academic outcome variables of students attending base schools with students attending non-specialty transfer schools. The total sample size was 2,898 students. The distribution between school types was: 2,800 students attending base schools all three years and 98 students attending non-specialty schools all three years. Data from the Wake County School System were appropriate for use in this study because the system has a student transfer option, which with some restrictions, allows students in the district to transfer to other schools in the district. The data obtained and examined in this research span over three academic years, 1998-2000. The variables are defined and reported by the Wake County Public School System Office of Evaluation and Research. The Wake County Public School System compiled the data set containing all demographic and outcome variables for this study.

Findings

The first research question compared students that attended base schools end-of-grade reading scores with the end of grade reading scores of students attending non-specialty schools. Specifically, the question was, "Are there differences in the standardized end-of–grade reading scores between students attending base schools and those who transfer to non-specialty schools?". Findings from the analysis indicated base school students had higher reading mean scores than students who transferred to non-specialty schools all three years. The results of the Chi-square augment the findings of the MANOVA in that students attending base schools achieve higher development levels. Both quantitative and qualitative differences between school groups (base/transfer) were noted for reading.

Differences in standardized end-of–grade math scores between students attending base schools and those who transferred to non-specialty schools were examined in the second research question. Specifically, the question was, "Are there differences in the standardized end-of–grade reading scores between students attending base schools and those who transfer to non-specialty schools?". Findings from the analysis indicated that base school students had higher math mean scores than transfer students for all the three years. Findings of the difference in scale scores were supported by similar findings of the comparison level scores. Both quantitative and qualitative differences between school groups (base/transfer) were noted for math.

The comparison of remediation rates between students attending base schools and those who transfer to non-specialty schools was assessed by research question three. Specifically, the question was, "Are there differences in remediation rates between

students attending base schools and those who transfer to non-specialty schools?". There were no significant differences in the rates of remediation between the students who attended base schools and those that transferred to non-specialty schools.

Research Question 4 measured differences in suspension rates between students attending base schools and those who transfer to non-specialty schools. Specifically, the question was, "Are there differences in suspension rates of students attending base schools and those that transfer to non-specialty schools?".

Findings from the analysis indicated that suspension for girls in base schools was higher than the mean for girls in transfer schools. Boys in the base schools had higher rates of suspension than boys in transfer schools. Boys had higher rates of suspension than girls in both school types.

The last research question was used to determine if there were significant differences between demographic variables that predict achievement for those students who choose non-specialty and those who remain at their base schools. Specifically, the question was, "Are there significant demographic differences between variables that predict achievement for those students who choose non-specialty schools and those who remain at their base schools?"".

There were no significant demographic differences predicting achievement for students who attended Transfer schools. There were significant ethnicity and gender differences that predicted achievement for students who attended Base schools.

Discussion

North Carolina, specifically, the Wake County Public School System, has engaged in offering school choice options. Magnets offer unique course tracks as well as year round options, while attempting to diversify student populations. Alternative schools provide an opportunity for students to attend school, who for a variety of reasons, are unable to attend school in a mainstream setting. Charter schools provide curricular and grade level specific options. The critical issue that faces all districts and states that have a variety of school options is how those options are impacting student outcomes. The present study was based on students attending schools that their parents chose. Both groups of students, students that attended their assigned base school and those transferred to a non-specialty school, engaged in choice. The intent of this study was to determine how that choice impacted students' academic outcomes.

Theoretical Considerations

Considering the current study within the Rational Choice Theory framework would suggest that the students at both school types would have similar academic outcomes. Both sets of students chose schools (feasible set of actions) to lead to the desired end (completion/graduation). The consequences of each action could be assessed as possessing outcomes that are characterized by certainty (attending and performing to standard) or quantifiable risk (attending and not performing to standard), or uncertainty (not attending and not performing to standard). The families chose the alternative (attend base school or transfer) that had the best chance of satisfying their desires. Taken all together, this feasible set of actions would lead to the probability that the students will achieve the desired outcome (completion/graduation). (March & Simon, 1958; Elster, 86;

Slote; 89). The question then becomes, “Can the actions of the families be seen as rational?” Would the students who transferred knowingly select schools where they would have lower reading and math scores and be more likely to be suspended than their counterparts at their base schools? Considering the findings from this study in the context of Social Choice Theory suggests individual behavior emphasizes the pursuit of personal goals. Following this principle of the theory might suggest students who transferred to non-specialty schools may have seemingly been in "pursuit" because they seemed to have engaged in a more active choice than those students who chose to stay at their base schools. The assumptions with these theories are that people have clearly defined objectives related to academic outcomes, as well as the ability to differentiate and rank the possible outcomes; however, some findings suggest that school choice enhanced parent satisfaction over an assigned school, even when achievement data showed no differences (Cookson, 1994; Bomotti, 1998). Further, West and associates (1993) found that the most important sources of information reported by parents when selecting a school were school visits, booklets, friends/neighbors, another child in the family, and local knowledge; however, what is undetermined is the influence each of these sources had on the parents’ final choices. Despite having reported parents visiting schools, West (1993) reported that half visited two or fewer and did not investigate all potential schools, but had limited themselves to a small number that they would study in detail.

Suspensions

An interesting finding of this study was the large difference in the suspension rates of males at the transfer schools. In both base schools and transfer schools, boys had higher rates of suspension. This finding substantiates previous findings related to the

disproportionate rates of suspensions and expulsions among male students. Males are typically disciplined more often than girls, and receive harsher disciplinary actions than girls for the same or similar offenses (Bennet & Harris, 1991). Suspension rates have proven to impact academic outcomes. Students with high rates of suspension typically have lower overall grade point averages and perform worse on standardized tests, than do students with lower suspension rates (Bennet & Harris, 1991). As it relates to choice, San Antonio's CEO Horizon Program, the Milwaukee Parental Choice Program, and the Washington Scholarship Fund show that the parents participating in school choice programs overwhelmingly define educational excellence in terms of discipline (Schiller, Plank, and Schneider, 1993). Parents may have been choosing a non-specialty school that exhibited signs of or had a reputation for stringent discipline, for students who exhibited problems prior to entering middle school.

Policy Recommendations

School choice is a complex issue. The goal of educators and administrators should be to ensure that options that will enhance students' achievement are available. The findings and conclusions of this study are used to provide recommendations for policy and further research. As the school choice discussions continue, the following recommendations should be considered:

1. Data on groups' participation in choice programs should be continually analyzed to monitor any impact on achievement, particularly achievement gap issues.

Based on the findings in the present study, the students that transferred to non-specialty schools had lower reading and math end-of-grade test scores. With the increased focus on students achieving at the appropriate developmental levels reducing

the achievement gap, trend data should be carefully analyzed to insure that choice programs do not result in adverse effects on student achievement in schools. The achievement gap is a persistent, pervasive, and significant disparity in educational achievement among groups of students as determined by a standardized measure. In North Carolina, many students are fairing poorly in performance achievement as measured by the state's standards of proficiency. Choice options should enhance the efforts of the state to eliminate this gap.

2. The school district should consider conducting a survey that obtains feedback from parents and the community.

This study provided some understanding of the outcomes of students that are enrolled in schools that their parents chose. In order to provide a more comprehensive view of parents' perceptions and reasons for choosing particular schools and particular school types, school system leaders should consider surveying parents of children in all schools. This survey would offer insight into what criteria families are considering in making school selections. Surveying the parents will provide an understanding of what parents desire and expect from school choice options.

3. Policy makers should use the findings of this and other studies on public school choice initiatives to make decisions regarding the provision of options for school age children.

Public school choice options should be publicized and explained to parents. Typically, public debate and commentary related to school choice focus on providing options for outside of public schools. The types of programs that are typically viewed and discussed as school choice options are those such as voucher programs. Public schools are sometimes considered to be in opposition with school choice initiatives. The

findings of this suggest that parents are engaging in choice within the public school sector, and controlled school choice is and should be considered to be, one of many possible approaches to meeting the needs of parents and students.

4. Higher education should include public school choice issues and research in discussions of current issues in educational leadership.

Educational alternatives such as the selection of non-specialty schools analyzed in this study represent a fraction of school choice not widely considered in school choice research. In order to effectively assess and determine the best school choice options, consideration needs to be given as to what public school options already exist and what enhancements can be made to existing options. Expanding and promoting the current student transfer policy creates another choice option for parents. Schools must address transfer policies to assist parents in making informed decisions.

Study Limitations

This study was conducted in one school district in North Carolina; the findings may not be generalizable to other school districts or states throughout the country. Despite the fact that the North Carolina End-of-Grade tests are developed in line with the North Carolina Course of Study, it is impossible to be certain that teachers utilized the Standard Course of Study to develop lessons, thereby making it impossible to determine if the end-of-grade tests accurately measured what students were taught. This study acknowledges that there are a variety of factors that describe academic outcomes; however, this study was limited to data that has been previously been collected and recorded that describe student outcomes.

Future Research

Timely research could be helpful as decisions on school choice are being considered. Schools have generally been involved in multiple, concurrent improvement efforts that have made it difficult to attribute school outcomes solely to any one initiative. Research on the outcomes of school choice has demonstrated positive associations among variables, but have been unable to produce conclusions about cause and effect. While studies have linked school choice initiatives to shared sense of values and purpose, high morale among teachers and students, and parent satisfaction, areas related to academic enrichment need to be studied. The literature that currently exists about school choice has come from research on the same programs. These few studies have been in-depth, but there are still areas and different types of programs that have gone unexamined. The current research is obtained primarily about and from parents; little is known about the students. Very little is known about the students who are participating in the choice programs. Continued documentation and study of choice efforts and outcomes are needed.

Appendix

Table 15

Univariate Statistics for EOG Reading and Math Scores by School Type

<u>Variable</u>	<u>N</u>	<u>M</u>	<u>SD</u>
<u>Reading Scale Score Year 1</u>			
Base	2613	159.39	8.20
Transfer	42	155.74	10.67
<u>Reading Scale Score Year 2</u>			
Base	2604	163.14	7.04
Transfer	43	160.37	9.11
<u>Reading Scale Score Year 3</u>			
Base	2621	165.50	7.24
Transfer	43	162.84	9.90
<u>Math Scale Scores Year 1</u>			
Base	2606	167.25	10.12
Transfer	43	161.07	11.27
<u>Math Scale Score Year 2</u>			
Base	2601	174.28	9.95
Transfer	44	169.41	11.50
<u>Math Scale Scores Year 3</u>			
Base	2618	179.07	11.29
Transfer	44	174.14	12.18

Table 16

Univariate Statistics for EOG Reading and Math Scores by Gender

<u>Variable</u>	<u>N</u>	<u>M</u>	<u>SD</u>
<u>Reading Scale Score Year 1</u>	1326	158.79	8.52
Male	1329	159.88	7.94
Female			
<u>Reading Scale Score Year 2</u>			
Male	1322	162.67	7.17
Female	1325	163.53	6.97
<u>Reading Scale Score Year 3</u>			
Male	1333	164.77	7.48
Female	1331	166.15	7.04
<u>Math Scale Scores Year 1</u>			
Male	1319	167.04	10.48
Female	1330	167.27	9.84
<u>Math Scale Score Year 2</u>			
Male	1320	174.23	10.25
Female	1325	174.17	9.74
<u>Math Scale Scores Year 3</u>			
Male	1331	178.92	11.63
Female	1331	179.05	11.00

Table 17

Univariate Statistics for EOG Reading and Math Scores by Lunch Status

Variable	N	M	SD
Reading Scale Score Year 1			
No	2714	160.88	7.45
Yes	481	152.36	8.10
Reading Scale Score Year 2			
No	2176	164.32	6.40
Yes	471	157.48	7.39
Reading Scale Score Year 3			
No	2184	166.79	6.54
Yes	480	159.39	7.49
Math Scale Scores Year 1			
No	2170	168.97	9.48
Yes	479	158.92	9.06
Math Scale Score Year 2			
No	2171	176.05	9.09
Yes	474	165.72	9.57
Math Scale Scores Year 3			
No	2183	181.11	10.36
Yes	479	169.30	10.43

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