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By

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ABSTRACT

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Based on surveys of and interviews with school teachers and administrators in Michigan, this dissertation study examined how school administrators and teachers in traditional public schools respond to school choice policies. Two competing economics perspectives provided useful insights into examining the issue: the neoclassical economics (NCE) perspective and the institutional and behavioral economics (IBE) perspective (Hirschman, 1970; Schmid, 2004). Regarding educators' responses to school choice policies, the NCE and IBE perspectives have different expectations. School choice policies or market approaches to education build on theory from neoclassical economics. According to the NCE perspective, school administrators and teachers will be responsive to the needs or demands of parents and will create effective schools in order to attract students and survive in the market. Questioning the NCE perspective, the IBE perspective suggests the possible effects of school choice policies on educators as follows. First, educators might fail to be aware of student enrollment changes. Second, even though they perceive student enrollment changes, they might have no concerns about them. Third, it is possible that they might not know what to do in order to increase student enrollment or they might employ inadequate strategies. Finally, they may know what to do in order to increase student enrollment but they might be engaged in socially inappropriate market

behaviors such as cream skimming. The paths educators take will depend on their beliefs or knowledge, capacity, and learning opportunities.

Many findings from this study did not seem to support the NCE perspective. First, educators did not know a lot about student enrollment changes and the percentage of choice students within their schools. To explain this, this study examined the association between incentive systems for educators and their awareness. However, the association was found to be statistically insignificant. In addition, incentive systems for educators were not aligned with changes in student enrollment. Second, schools and districts did not make much effort to attract more students, and no significant associations were observed between activities for attracting more students and the intensiveness of competition among schools. Third, educators tended to view the problems related to students or parents as being more serious than the problems related to educators themselves. In addition, school activities for attracting students did not seem to be commensurate with the seriousness of school problems perceived by educators. Finally, educators tended to evaluate the effects of school choice programs on their practices and schools negatively. The IBE perspective would be of help in explaining these findings.

This study challenged the basic assumptions made by proponents of school choice policies by addressing educators' responses to such policies. In addition, by introducing the IBE perspective to research on such policies, this study encourages scholars of school choice policies to pay attention to educators' limited information, their capacity for information processing, and their beliefs.

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CHAPTER 1

TRENDS IN SCHOOL CHOICE POLICY STUDIES

Introduction

Among the popular education reform initiatives in recent years are school choice policies that emphasize parental choice and competition among schools. School choice policies or market approaches to education build on theory from neoclassical economics. The neoclassical economics perspective assumes that humans as economic actors seek their maximum interest, make efforts to obtain perfect information and make rational choices to satisfy their interest. They argue that since a free market system based on choice and competition will guarantee effectiveness and efficiency of goods or service production, government should not regulate or control the free choice of economic actors (Friedman, 1962). According to the neoclassical economics perspective, parents' choice of schools for their children is an economic action and they will choose the most appropriate schools for their children with perfect information about available schools in order to maximize their interests. Further, school administrators and teachers will be responsive to the needs or demands of parents and will create effective schools in order to attract students and survive in the market.

There are many research studies on school choice programs, but they do not consistently support arguments from neoclassical economics. Research studies on the impact of competition among schools on academic achievement and school culture have produced mixed results (Hoxby, 2004; Shanker & Rosenberg, 1992; Witte, 1996). For instance, Hoxby (2004) and Holmes, DeSimone, and Rupp (2003) argue that school

competition due to charter schools contributes to improving charter schools or traditional public schools, whereas Shanker and Rosenberg (1992) maintain that private schools under competition do not outperform public schools when parental socioeconomic backgrounds are taken into account. In terms of school climate, Chubb and Moe (1988) argue that climates are better in private schools than in public schools, while Benveniste, Carnoy, and Rothstein (2003) argue that public schools and private schools do not differ in their organizational cultures when family background and school community are taken into account.

In terms of parental preferences for schools, there are many preferences that are not related to academic achievement or that exacerbate social inequalities in schools (Abernathy, 2008; Fuller, Elmore, & Orfield, 1996; Holme, 2002; Martinez, Godwin, & Kemerer, 1996; Wells, 1996). For example, some middle class parents choose schools for their children based on status ideologies that emphasize race and class (Holme, 2002; Schneider & Buckley, 2002). Lee, Croninger, and Smith (1996) showed that Detroit-area residents rated two nonacademic qualities of schools as most important to them: school safety and whether schools supported their moral and ethical values. Martinez, Godwin, and Kemerer (1996) argue that the utilization of a public choice program in San Antonio was affected by family backgrounds such as parent education, family income, the number of family members, and children's future education.

The effects of school choice polices depend on how schools (i.e., the supply side) and parents (i.e., the demand side) respond to choice and competition, but there are only a few research studies on how school administrators and EMOs (educational management organizations) respond to school choice policies (Abernathy, 2008; Arsen, Plank, &

Sykes, 2002; Miron & Nelson, 2002). Based on surveys of and interviews with school teachers and administrators in Michigan, this dissertation study will examine how school administrators and teachers in traditional public schools respond to school choice policies. In particular, this study will address the following research questions:

1. How much are teachers and school administrators aware of changes in enrollment? Do schools have incentive systems aligned with decreases or increases in student enrollment?

2. How are schools/districts that lose students as part of school choice policies (i.e., losing schools/districts) different from schools/districts that gain students (i.e., gaining schools/districts) in terms of teachers' working conditions such as available time and resources for teachers, leadership, and opportunities for professional development? Are teachers' working conditions associated with the intensiveness of school competition?

3. What are schools doing to attract students? Is the degree of organizing activities for attracting more students associated with school competition? Are the activities associated with school problems or parents' school choice reasons?

4. How do teachers and administrators perceive the impact of school choice policies on teachers and administrators themselves and their schools? Are their perceptions of the impact associated with the degree of competition among schools?

Two competing economics theories on markets guide this study: the neoclassical economics perspective and the institutional and behavioral economics perspective. They provide useful frameworks for examining how parents, school administrators and

teachers respond to school choice. These theories have different assumptions with regard to human actions, the roles of a market and government (or institutions), and the performance of a market. From the neoclassical economics perspective, whether and how school administrators and teachers respond to school choice programs depend on whether and how changes in enrollment due to school choice policies affect their interests, including their job security or benefits. To examine whether school choice policies bring competition among schools and motivate school administrators and teachers to improve their practice, we need to examine the nature of their job security and benefits and how these are affected by changes in student enrollment due to school choice.

In contrast to the neoclassical economics theory, the institutional and behavioral economics (IBE) perspective questions basic assumptions of neoclassical economics and posits that the behaviors of actors in a market are determined not only by the market system but also by social institutions (i.e., social arrangements) and the capacity of actors to behave in certain ways (Schmid, 2004). Institutions are characterized by laws, norms, ideologies, and beliefs. The IBE perspective builds on institutional approaches in sociology, behavioral science, and cognitive science. This perspective can help policymakers attend to the importance of the norms, ideologies, and beliefs that school administrators and teachers have, and how these are affected by broad institutional arrangements.

Examining how competition among schools is affected by the nature of schools' incentive systems, school administrators' and teachers' perceptions and beliefs, and their capacity to cope with competition, this study examines whether it is important for policy

makers to consider educators' beliefs and capacity when they design school choice policies.

Literature Review

Previous studies on school choice focused on 1) the impact of school choice programs on student academic achievement (Hoxby, 2004; Lubienski, Crane, & Lubienski, 2008; Shanker & Rosenberg, 1992; Witte, 1996) and 2) factors that influence parental choice (Fuller et al., 1996; Holme, 2002; Lee et al., 1996; Schneider & Buckley, 2002) and socioeconomic segregation due to school choice programs (Abernathy, 2008; Martinez et al., 1996; Wells, 1996). However, there are only a few research studies on how school administrators and EMOs (educational management organizations) respond to school choice policies (Abernathy, 2008; Arsen et al., 2002; Miron & Nelson, 2002).

Impact of School Competition on Academic Achievement

Research findings about the effect of school choice on academic achievement are mixed. Hobxy (2004) compares the reading and mathematics proficiency rate of charter school students to that of their fellow students in neighboring public schools. She assumes that greater levels of proficiency among students in charter schools result from the better performance of charter schools (compared to traditional public schools) which are operated in education markets. She found across the nation that the proportion of students rated as proficient on state exams in charter schools was larger than that in the matched schools by 5.2% in reading and 3.2% in math. For example, charter schools in Alaska and Louisiana had more proficient students than matched public schools by about 20% and 30%, respectively. However, charter schools in North California and Texas had fewer proficient students than public schools by 4.3% and 6.8%, respectively.

Holmes, DeSimone, and Rupp (2003) also assume that the expansion of the charter school system has encouraged traditional schools to increase achievement. They investigate how the introduction of school choice in North Carolina, via a dramatic increase in the number of charter schools across the state, affected the performance of traditional public schools on statewide tests. By analyzing the relationship between 1) test scores and 2) the distance between public schools and charter schools, they found that the introduction of charter school competition caused an approximate one percent increase in achievement scores, which constituted about one quarter of the average yearly growth in North Carolina.

Many research studies which address the impact of school choice policies on student achievement share the common assumption that school choice policies will create competition among schools and increase student achievement. Therefore, when charter schools and traditional public schools adjacent to them get higher scores or more proficient students than other schools, they interpret this to mean that competition among schools improved student achievement. However, alternative explanations such as a selection effect or a cream skimming effect[1] can invalidate the competition effect. For example, in the case of charter schools in North Carolina, it is also plausible that public schools came to have relatively more proficient students without improving student achievement because lower achievers moved from public schools to charter schools. The

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[1] The concept of cream skimming was drawn from the field of business. The "cream" represents high-value or low-cost customers, who are more profitable to serve. When cream skimming occurs (i.e., when these customers are the focus of a given business), more expensive or harder-to-service customers are left without the desired product or service at all or they are "dumped" on some default provider (http://en.wikipedia.org/wiki/Cream_skimming). In the context of charter schools, cream skimming refers to charter schools' or publics schools' behavior when they try to recruit high-achieving or low-cost students without improving student achievement or reducing the cost for education (Lacireno-Paquet, Holyoke, Moser, & Henig, 2002).

introduction of a charter school system might redistribute students between traditional public schools and charter schools rather than increase public schools' achievement to survive competition.

Parents as Consumers

Research studies on parents' responses to school choice policies address the factors parents consider when they choose schools for their children, whether there are any differences in utilizing choice options between socioeconomic classes, and the impact of parental choice on equity in education or social desegregation.

What parents really prefer when they choose schools is not clear. Most surveys show that parents endorse the "right" academic values such as student achievement, school curriculum, and teacher quality when asked what they consider in choosing schools (Armor & Peiser, 1998; Greene, Howell, & Peterson, 1998; Kleitz, Weiher, Tedin, & Matland, 2000; Public Policy Forum, 1998; Schneider, Marschall, Teske, & Roch, 1998; Vanourek, Manno, & Finn, 1998). However, in-depth interviews with parents and analyses of information search behavior reveal that parents often choose schools based on status ideology that emphasizes race and class (Holme, 2002; Schneider & Buckley, 2002). The parents in Holme's (2002) study believed that schools serving higher-status (Whiter and/or wealthier) students were presumed to be good, while schools serving lower status students (lower income and/or students of color) were presumed to be unsatisfactory. Status concerns were far more salient to them than a school's curriculum and instructional quality. Analyzing the school information search behaviors

of parents in DCSchoolSearch.com[2], Schneider and Buckley (2002) found a strong bias toward accessing the demographic characteristics of the student population, which is in marked contrast to verbal reports about the importance of race.

The utilization of public choice programs can be affected by family backgrounds such as parent education, family income, the number of family members, and children's achievement level (Martinez et al., 1996). Parents who are better educated, more affluent, have higher expectations for their children, have fewer children, have children with higher scores in tests, and/or have female students are more likely to utilize school choice programs. Parents have limited information on school choice programs and there is information asymmetry between races (Henig, 1996). Henig's (1996) study of the magnet school program in Montgomery County, Maryland, suggests that there were many parents who had no information on the magnet school program. The study revealed the differences in the amount of information among ethnic groups. While over 70% of White parents had heard of the term "magnet schools" or "magnet programs," only about 40% of Hispanic parents had heard of one or both of these terms. Families with limited information rely on anecdotal information or seemingly superficial assessments of school quality (Lee et al., 1996).

Even though parents appreciate quality differences among schools, some parents might not utilize their choice options. After studying school choice in St. Louis, Wells (1993) explained the differences in the interpretation of choice opportunities among

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[2] DCSchoolSearch.com presents data on all the "traditional" public schools in Washington, DC as well as the more than 30 public charter schools that now enroll over 10% of the city's school age children. The site provides a host of information on each school, including location, test scores, student demographics, mission statement, and academic programs. There is a core of information (e.g., test scores and student demographics) available on each and every school.

parents and students from different races and classes. Not all low-income minority students and parents exercised their choice options. Parents who feared competition or failure in a higher status school or who did not have trust in the educational system were most likely to choose not to exercise their choice option.

In sum, the research findings about parental choice and preference show that parents tend to report that their choice of schools is motivated by academic quality when asked but their actual choice or behaviors often favor status ideology or socioeconomic segregation. Some parents who fear competition or do not have trust in schools might not exercise their choice options. In addition, many parents do not have enough information about school choice programs and available schools, and there is information asymmetry between socioeconomic classes.

Educators' Responses to School Choice Policies

With respect to administrators' and teachers' responses, the research studies were conducted at institutional levels such as the school or district level rather than the individual level such as the administrator or teacher level. Those studies addressed the differences between public schools and private schools in terms of effective school climate, the strategies of charter schools, and what school districts that had lost students to other school districts or charter schools were actually doing to attract students.

The research findings about whether private school culture is different from traditional public school culture are mixed. Chubb and Moe (1988) identified the factors of effective schools from a literature review and examined whether a market system of private schools or a system of public schools would lead schools to become effective. They hypothesized that private schools which were operated in a market would be in a

better position to become effective schools. As they predicted, analysis of the Administrator and Teacher Survey (ATS) data of 1984 also showed that private schools earned better scores on each factor associated with effective schooling than public schools.

However, Benveniste, Carnoy, and Rothstein's (2003) case study findings are inconsistent with Chubb and Moe's findings. They conducted case studies of eight public and eight private schools in California, in which they conducted extensive interviews with principals, other administrators, teachers, parents, and 8th-grade students. The schools were selected to typify a range of socioeconomic characteristics and included both sectarian and nonsectarian private schools. They found that there were few differences between public and private schools in similar communities. Based on their data collection, Benveniste et al. argue that "the social, cultural, and economic backgrounds of the parents and the community in which the school was located seemed to be the main determinant of variation, much more so than a school's public or private character" (2003, p. xiv).

To evaluate whether private schools are more effective than public schools, we need to consider the context in which current private schools are situated. The effective climate or culture of current private schools can result from scarcity of private schools, high tuition cost, homogeneity of students and parents, and high socioeconomic background of parents.

Maximizing profits can result in deterioration in education. Under the market system, some schools recruit low-cost students and exclude high-cost students (Arsen, Plank, & Sykes). For instance, most charter schools in Michigan enroll only elementary

students. Public school districts participating in inter-district choice face a similar incentive to open places for students in the lower grades. Charter schools enroll fewer special education students than neighboring public schools. As a result, they enjoy lower costs than traditional public school districts. For management companies, administration costs are two to five times higher than the expenditure for similar purposes in school districts. High administration costs appear to cut into instructional spending, not the cost of facilities. Less spending on instruction reflects lower salaries for teachers, failure to provide special services, and in some cases reluctance to reduce class size, all of which might threaten the school's ability to improve student achievement (Miron & Nelson, 2002).

In Arsen et al.'s (1999) study, school districts which have been losing students to other school districts or charter schools due to school choice policies were implementing various measures to retain students from their districts and attract students from other districts, but they appeared to invest in advertisement or provide more of the same programs, like all-day kindergarten, rather than making efforts to improve teaching practice or teacher quality.

It is not clear whether competition among schools makes traditional public school principals who are facing competition with charter schools more attentive to parental involvement. According to Abernathy (2008), while charter school principals are more likely to spend a great deal of time building relationships with the parent community than traditional public school principals, there are almost no differences between public school principals who are facing competition with charter schools and public school principals who are not.

Increased competition might weaken rigorous programs. While there are few research studies on how competition affects programs in K-12 schools, there are some examples in the higher education market. In higher education, for example, as Hofstra University increased its standards and requirements for its educational administration program, they faced a student enrollment decrease in the program. Under this situation, the fastest, easiest, and cheapest programs can flourish rather than more rigorous, high-quality programs (Young, Peterson, & Short, 2002). Aligning programs to the needs of consumers does not necessarily mean quality improvement.

In sum, the empirical research findings reveal that it is not clear whether parental choice and competition among schools are critical conditions for effective schools. Rather, parents' socioeconomic background appears to be a more important determinant of school culture and climate. When schools are run by private firms like EMOs which seek profits, the investment in instruction might decrease but management costs might increase. This might lead to an increase in education costs or a lower quality teaching force. In addition, opportunities for special education students might be limited or special education students might have to pay more tuition than general students in the education market.

Implications for This Study

Teaching practice and leadership are critical in improving school quality and student learning (Leithwood, Louis, Anderson, & Wahlstrom, 2004). However, many research studies on the impact of school choice policies on student achievement have failed to attend to how school choice policies affect teaching and leadership practices, assuming that competition among schools would motivate educators to improve their

teaching and leadership practices in order to attract more students and enhance their reputation. Inconsistent research findings on the effect of school choice policies on student achievement imply that school choice polices might not contribute to improving teaching and leadership practice. As an attempt to explain these inconsistent research findings regarding the effect of school choice policies on student achievement, this study addresses how school choice policies affect educators' teaching and leadership practices.

Studies on parental school choice imply that parents' school choice behaviors can quantitatively limit competition among schools and might signal that educators do not have to improve their teaching and leadership practice and programs in order to attract more students. There is information asymmetry between socioeconomic classes and some parents fear competition or failure in a higher status school. These findings imply that parents might not exercise choice options enough to bring about competition among schools. In terms of parental preferences for schools, most parents, when asked, seem to say that they choose schools for their kids based on academic quality such as student achievement, school curriculum, and teacher quality. At the same time, some studies based on in-depth interviews with parents and parents' information search patterns on the internet revealed that some middle school parents choose schools for their children based on status ideologies that emphasize race and class. These studies imply that school choice might reinforce school segregation, and educators might not necessarily make serious efforts to improve school quality. Assuming that educators as service providers will attend to the factors which affect parental school choice and their responses will be affected by how they frame parental choice, this study examines how educators frame

parental choice and how the framing of parental choice affects their responses to student enrollment changes.

Research studies on the responses of parents and educators to school choice imply that the introduction of a school choice policy itself does not bring about school improvement. Effective school climates in private schools might result from the scarcity of private schools and student selection, different priorities in education goals, high tuition costs, homogeneity of students and parents, and high socioeconomic backgrounds of parents. Some charter schools which are run with a given budget from districts or their state government tend to maximize their profit by recruiting low-cost students like lower grade students and excluding high cost students like upper-grade students and special education students. A study addressing higher education competition and program quality implies that severe competition for students might not lead to rigorous or better programs when students do not want rigorous or quality programs (Young et al., 2002). What really matters might be how educators frame choice options, problems, and strategies and whether they have capacity to cope with those issues.

Another issue in research on school choice is that prior research studies did not focus much on traditional public schools. Considering the current education system where traditional public schools account for a majority of schools and school choice policies among public schools have been introduced broadly, it is important to examine how school administrators and teachers in traditional public schools respond to school choice policies.

CHAPTER 2

THEORETICAL FRAMEWORK AND RESEARCH QUESTIONS

Theoretical Framework

Two competing economics theories on markets provide useful insights into examining how parents, school administrators and teachers respond to school choice: the neoclassical economics perspective and the institutional and behavioral economics perspective. These theories have different assumptions with regard to human actions, the roles of a market and government (or institutions), and the performance of a market.

Neoclassical Economics Perspective

There is not complete agreement on what is meant by neoclassical economics and as a result, there is a wide range of neoclassical approaches to various problem areas and domains. Although certain branches of neoclassical theory may have different approaches, neoclassical economics rests on the following three assumptions (Samuelson, 1973),

1. People have rational preferences among outcomes that can be identified and associated with a value.

2. Individuals maximize utility and firms maximize profits.

3. People act independently on the basis of full and relevant information.

From these three assumptions, neoclassical economists have built a structure to understand the allocation of scarce resources among alternative ends. In the context of school choice, parental choice and responses of educators to parental choice can be thought of as the allocation of scarce resources among alternative ends. Since neoclassical economists assume that a free market system based on choice and

competition will guarantee effectiveness and efficiency of goods or service production, they argue that government should not regulate or control the free choice of economic actors (Friedman, 1962).

According to this perspective, in a free education market where parents choose schools for their kids and schools make efforts to attract more students, parents will choose the most appropriate schools for their children with perfect information about available schools in order to maximize their interests or preferences. In addition, school systems will create market incentives under which educators get rewards such as job security, a bonus, or a raise when they attract more students and get sanctions or penalties such as a wage cut or loss of their jobs when they lose students. In order to get rewards by attracting more students, educators will make efforts to meet parents' needs or preferences, evaluate and compare their own programs with those of competing schools, and reduce costs (see Figure 1). This study examines whether school systems create market incentives for educators and how educators make efforts to attract more students.

In order to introduce school choice policies as a means to improve school quality, neoclassical economists also assume that the preferences or interests of parents are aligned with school quality and the social objectives of public education. However, it is not easy to define school quality because it is related to various value judgments about the goals of education, what to teach, and how to teach. What a society expects of schools can be decided by the individual choices of parents and children or by collective decision-making. While proponents of the neoclassical economics perspective argue that individual choice is a way to address debates about how to define school quality,

opponents of school choice policies maintain that individual choice can exacerbate social equity and social inclusion.

Institutional and Behavioral Economics Perspective

Questioning the basic assumptions of neoclassical economics, the institutional and behavioral economics perspective postulates that the behaviors (including decisions or choices) of actors in a market are influenced by social institutions (i.e., social arrangements) such as laws, norms, ideologies, and beliefs (Schmid, 2004). Drawing on behavioral science research on cognition and perception, institutional and behavioral economists argues that human behaviors or responses to an event are shaped by social institutions rather than just their rational preferences or maximization of utility or profits. Behavioral science indicates that the human brain features four aspects which limit human capacity and lead humans to develop social institutions to overcome their limited capacity; 1) bounded rationality, 2) emotions and evaluations, 3) behavioral regularities, and 4) learning (Schmid, 2004). To predict the possible responses of educators in the context of student enrollment changes due to school choice, I assume that these four aspects of the human brain are applied to educators as humans.

First, school administrators and teachers have bounded rationality. The human brain has limited information processing capacity and it features modularity. These two characteristics of the human brain result in bounded rationality. Humans are procedurally rational and use whatever reasoning power is available, but they know that they cannot be substantially rational in the sense of considering everything that could possibly affect their decisions (Simon, 1982). In the context of school choice, not all parents have enough information about which schools are available or are best for their kids and no

parents have perfect information (Elmore, 1986; Henig, 1996; Lee et al., 1996; Pearson, 1993). Even those parents who are provided with enough information might not know what the information means for them and their kids (Wells, 1996). For school administrators and teachers, when there are decreases in student enrollment, we cannot assume that they perceive such changes. In addition, even though they may perceive such changes, they might not consider them as a problem, or if they consider the changes to be a problem they might not know how to solve the problem.

An individual educator might have conflicting desires or interests. This implies that he/she might not respond consistently to an event or signal. For example, even though he/she is trying to improve their teaching practice to get rewards, he/she might not continue to do this at other times without any changes in the environment. This results from the modularity of the human brain. The modularity of the human brain means that different brain components have some ability to affect behavior independently of other components. In other words, the brain is not unitary or necessarily internally consistent (Carter, 1998). Since different parts of the brain can take in information from the environment and issue orders for action without the participation of other parts, our brains are not completely integrated and hierarchical.

Multiple beliefs or opinions originate from the modularity of the human brain and this can create problems for public policy and collective decision making. For instance, when asked, parents say that their choice of schools is motivated by academic quality such as student achievement, school curriculum, or teacher quality (Armor & Peiser, 1998; Greene et al., 1998; Kleitz et al., 2000; Public Policy Forum, 1998; Schneider et al., 1998; Vanourek et al., 1998), but in reality they might choose schools based on status

ideology which emphasizes race and class (Fuller et al., 1996; Holme, 2002; Lee et al., 1996). While teachers might think that they should improve their teaching practice to attract more students into their schools, they might want to relax during their leisure time rather than devote such time to trying to improve their teaching because another part of them would prefer to relax. The modularity of the human brain implies that thinking and action might not be consistent. Therefore, to examine how school choice policies work in the real world, we need to examine whether educators perceive changes in student enrollment, how they frame such changes, whether they have capacity to solve problems associated with such changes, and how they act in practice.

Second, educators' responses to events or other people are mediated by emotions like pleasure or pain. "The brain continuously constructs an affective or hedonic commentary on the current state of affairs..." (Kahneman, 1999, p. 7). Phenomena and other people bring pleasure or pain and we seek or avoid them. However, not all phenomena or people elicit so much emotion that it leads to a reaction. Events or contingencies relevant to the actual or expected achievement of or harm to major goals, motives, and values bring about emotions that can change behaviors (Frijda, 1999).

In relation to school choice, the key issue is whether phenomena like a student enrollment change itself and/or resulting changes in rewards or job security can be enough of an emotional stimulus to motivate teachers and administrators to improve school quality. Emotions are triggered by beliefs which provide a meaning and sense of direction to educators. As a result, educators' beliefs strongly affect their behaviors (Abelson, 1979; Bandura, 1986; Brown & Cooney, 1982; Clark & Peterson, 1986; Eisenhart, Shrum, Harding, & Cuthbert, 1988; Nespor, 1987; Pajares, 1992; Rokeach,

1968). For instance, whether student enrollment decreases can trigger educators' emotions is determined by their beliefs. If educators believe that the student enrollment in their school decreased because their school is located in a disadvantaged area and does not have enough resources to attract students again, we cannot assume that the student enrollment decrease will elicit teachers' emotions enough or in ways that motivate them to reflect on their teaching practices. The difficulty in policy formulation like school choice is that the degree of pleasure versus pain is itself not calculated in any means-ends relationship, but is the material of calculation or direct action. Emotions can replace calculation and they can alter the values used in calculation (Elster, 1998). Therefore, even though there are the same rewards or sanctions in terms of money or job security, how they work depends on the beliefs possessed by individual educators.

Third, educators might simplify complex signals to overcome the limited information processing capacity and modularity (i.e., signals in their environment or in situations they encounter) and develop behavioral regularities. For example, humans make mental accounts (Thaler, 1985), organize choices lexicographically (Earl, 1983), engage in selective perception (Simon, 1991), develop habits and standard operating procedures, and identify sub-goals (Simon, 1979). In curriculum reform, educators tend to adhere to surface level understandings, which focus chiefly on the coverage and sequencing of mathematics and science topics and fail to press any fundamental reconceptualization of mathematics and science knowledge and teaching practice (Cohen & Ball, 1990; Spillane, 2004).

When schools encounter decreasing student enrollment, school administrators and teachers might not pay attention to the causes of the student enrollment decreases.

Though there might be many other reasons that their school is losing students, they might simplify or selectively perceive that they are losing students because their schools are, for example, located in low-income neighborhoods. As a result, they might fail to evaluate their schools from different perspectives or to improve school quality.

Finally, educators engage in learning and prior knowledge and beliefs affect their learning. Educators as humans make sense out of their environment and act upon it (Mantzavinos, 2001). Humans take in sensory information, act, take in more sensory information and then rest, continue, or escape. There are two cognitive models to explain human learning: a model of stimulus, behavior, and reinforcement (Skinner, 1971) and a complementary model of cues and patterns. Stimuli include such things as changes in student enrollment and changes in rewards and job securities. In response to a stimulus, humans engage in behavior that may change something in their environment. Feedback either reinforces the behavior or alters it. As emotions are affected by educators' beliefs or ideologies, their learning of and responses to student enrollment changes are also affected by their beliefs or ideologies. In relation to school choice policies, it is important to examine whether the rewards or sanctions as stimuli are enough to cause educators to change their teaching or leadership practices and whether appropriate feedbacks are provided for their efforts in order for them to continue to make efforts.

When the human brain tries to make sense out of complex new sensory inputs that it cannot possibly compare in detail to prior experiences, it sees a pattern and in some sense fits an old understanding and habit to the new situation. This theory explains the reasons that many curriculum reforms fail to reconceptualize educators' prior knowledge and practice (Cohen & Ball, 1990; Spillane, 2004). This theory also implies that there

should be considerable efforts to change the prior knowledge or beliefs. However, this does not imply that educators' beliefs or ideologies are fixed and unchangeable. In relation to the context of school choice, when educators analyze the causes of student enrollment decreases in their schools, their prior understanding of parental school choice can affect their analysis. If they believe or know that parents tend to choose schools for their kids based on school location or student socioeconomic backgrounds, their analysis is more likely to focus on those aspects rather than teaching practice or student discipline.

In sum, the institutional and behavioral economics perspective runs counter to the basic assumptions of the neoclassical economics perspective (i.e., rational choice based on perfect information, maximization of utility and profits, and acting independently). With limited information processing capacity, it is not easy for actors to identify all available alternatives, compare and evaluate them, and finally choose best options. Humans rely on behavioral regularities to overcome their limited information processing capacity. Humans do not act independently on the basis of full and relevant information. Instead, they make decisions or act based on various grounds such as emotions, beliefs, ideologies, norms, or self interest. Self interest is just one of many references and may not be critical in decision making and action.

The institutional and behavioral economics perspective suggests the possible effects of school choice policies on educators as follows (see Figure 1). First, educators might fail to be aware of student enrollment changes. Second, even though they perceive student enrollment changes, they might have no concerns about them. Third, it is possible that they might not know what to do in order to increase student enrollment or they might employ inadequate strategies. Finally, they may know what to do in order to increase

student enrollment but they might be engaged in socially inappropriate market behaviors such as cream skimming. The paths educators take will depend on their beliefs or knowledge, capacity, and learning opportunities.

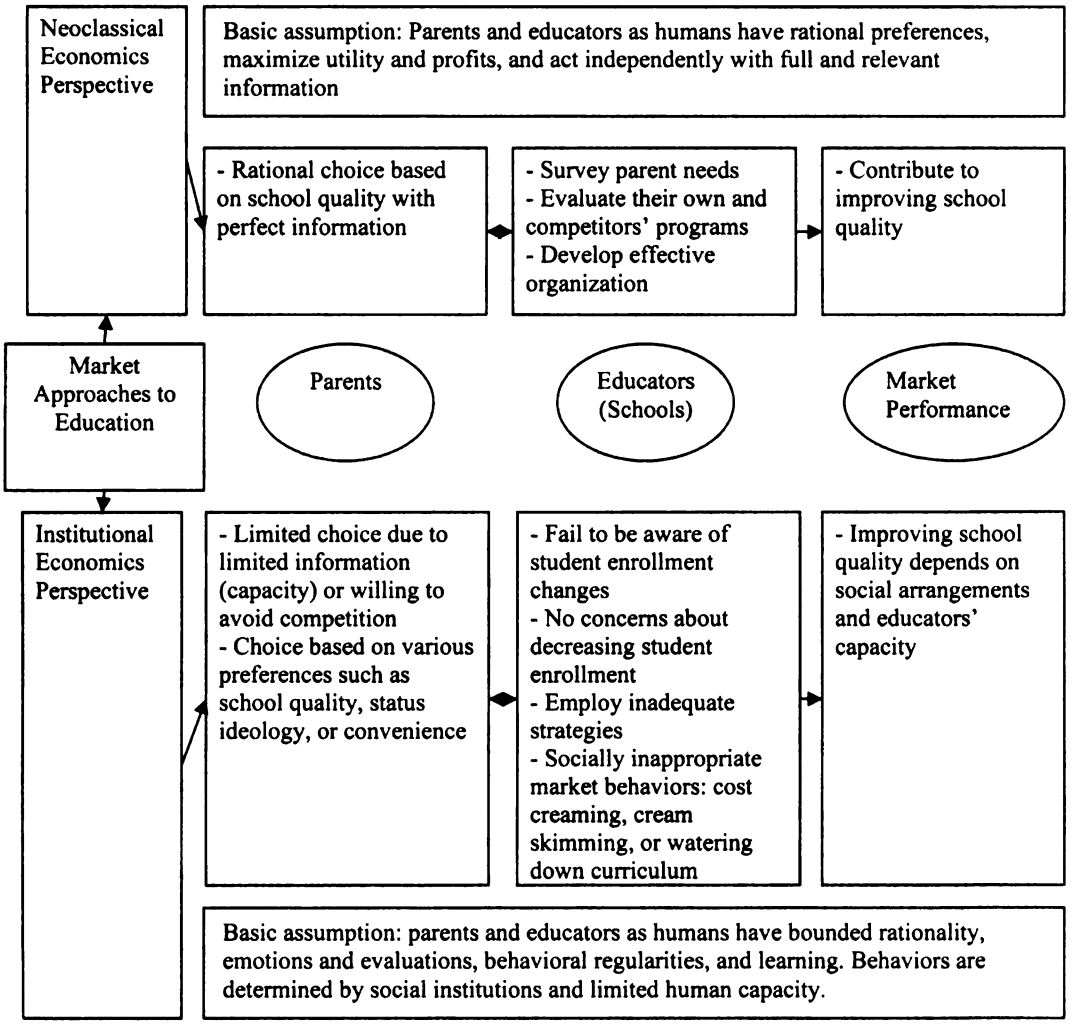

Figure 2-1: Neoclassical economics perspective vs. Institutional economics perspective

Research Questions and Hypotheses

Research Question 1) How much are teachers and school administrators aware of changes in enrollment? Do schools have incentive systems aligned with decreases or increases in student enrollment?

Hypothesis 1a (NCE): When there are rewards or sanctions for student enrollment changes, educators would be aware of enrollment changes. In addition, the degree of educators' awareness of student enrollment changes (or the percentage of choice students) at their schools would be positively associated with the degree of the impact of student enrollment changes on them.

Hypothesis 1b (IBE): Educators attach different meanings to the rewards and sanctions depending on their values or belief systems. Thus, the impact of the rewards and sanctions would be different among educators in a school. As a consequence, the same rewards or sanctions could make some educators more sensitive than others to enrollment changes.

Research Question 2) How are schools/districts that lose students as part of school choice policies (i.e., losing schools/districts) different from schools/districts that gain students (i.e., gaining schools/districts) in terms of teachers' working conditions such as available time and resources for teachers, leadership, and opportunities for professional development? Are teachers' working conditions associated with the intensiveness of school competition?

Hypothesis 2a (NCE): Schools in gaining school districts would have better working conditions because rational parents would choose schools with better working conditions and educators would make an effort to provide better working conditions. The

degree of the differences in working conditions between gaining and losing schools would be associated with the degree of school competition (i.e., the degree of student enrollment change). As competition among schools becomes more intensive, schools will make more effort to improve working conditions.

Hypothesis 2b (IBE): There might be no significant difference in teacher working conditions between schools in gaining and losing school districts when educators do not know the importance of teachers' working conditions or when they underestimate the effects of improving teachers' working conditions. In addition, parents might not consider teachers' working conditions when they choose schools for their children. In this case, parental choice would not lead educators to provide better working conditions.

Research Question 3) What are schools doing to attract students? Is the degree of organizing activities for attracting more students associated with school competition? Are the activities associated with school problems or parents' school choice reasons?

Hypothesis 3a (NCE): The schools would examine who choice students/families are and what types of schooling options they are seeking. As competition among schools becomes severe, schools would make more efforts to attract students. In addition, as a given school problem becomes more serious, schools would make more efforts to address that problem. Finally, schools' strategies for attracting students would be closely associated with the reasons for parents' school choice decisions.

Hypothesis 3b (IBE): There might be no difference between schools when schools fail to analyze problems, do not have enough capacity to come up with appropriate strategies, or just adopt other schools' strategies. Schools might rely only on their

perceptions of the reasons for parents' school choice decisions without doing systematic research about parents' actual decisions.

Research Question 4) How do teachers and administrators perceive the impact of school choice policies on teachers and administrators themselves and their schools? Are their perceptions of the impact associated with the degree of competition among schools?

Hypothesis 4a (NCE): Educators would believe that school choice programs could contribute to improving school quality through improving their teaching (leadership) practices, academic programs, extra-curricular activities, collaboration with colleagues, and relationships with parents. In addition, educators in schools under more intensive competition would be more likely than those in schools under less intensive competition to have these beliefs.

Hypothesis 4b (IBE): Educators might not believe that school choice programs could contribute to improving school quality through improving their teaching (leadership) practices, academic programs, extra-curricular activities, collaboration with colleagues, or relationships with parents. In addition, there might be no associations between the intensiveness of competition and their perceptions of the degree of the impact of school choice programs on educators themselves and/or schools.

CHAPTER 3

METHODOLOGY

In order to examine in depth how school administrators and teachers in traditional public schools respond to school choice policies, quantitative and qualitative research methods were employed in this study.

Research Sites and Policy Context

The research sites for this study are in the state of Michigan. The schools of choice state policy (an inter-district school choice program) in Michigan was made possible by the approval of Proposal A in 1994, which radically changed the basis of school funding. Before 1994, the amount of revenue in each school district depended primarily on local property values and the local millage rates. When the sources of school funding shifted primarily from districts to the state, Michigan also introduced charter schools and schools of choice policies.

Since 1994, most local school districts have received their operating revenue from state appropriations based on the number of students enrolled and local property tax millage. The state appropriation per student in 2005-06 was about $6,100 to 6,800 per student in the districts studied here. In addition, school districts receive funding from local government and federal government. However, there is even more variance among school districts in terms of the amount of funding from local and federal government. For example, the amount of local funding in the districts in this study in 2005-06 ranged approximately from $1,390 to $5,230. That of federal funding in the districts in this study

sites in 2005-06 ranged approximately from $170 to $1,320 (http://www.nces.ed.gov/ccd/districtsearch/).

In Michigan, students may enroll in any public schools within their intermediate school districts (ISDs) or in contiguous school districts. Note that a school district may decide whether or not to make spaces available for non-resident students. But a district may not prevent students who reside within its boundaries from attending schools in another district. This means that not all public schools participate in competition for students. If there are more applicants than openings, districts must use a fair lottery to make enrollment decisions.

Interviews with School Administrators and Teachers for a Pilot Study

Interviews were conducted during fall 2007 and spring 2008 in order to examine whether the theoretical framework of this study was appropriate and to develop survey questionnaires. Two school districts in the state of Michigan were selected. While one school district was gaining students from neighboring school districts because of school choice programs during the past five years, the other was losing students to neighboring school districts. In the gaining school district, three schools (one at each school level) were selected, and the principal and two teachers in each school participated in an interview. In the losing school district, two schools (elementary and high school) were selected, and the principal and two teachers in each school participated in an interview. The participants in each district were recruited using chain-referral sampling (Glesne, 2006). Each interview lasted about 20 minutes to one hour.

The interviews addressed the following issues in depth: whether and how the participant perceives changes in enrollment in his/her school or district; how changes in

enrollment have impacted his or her (colleagues') salary, job security, and benefits; how the changes in enrollment have affected classroom teaching in his or her school or district; why the enrollment in his/her school or his/her district has decreased or increased; whether and how the participant, his/her school, and/or his/her district made (or currently makes) efforts to attract more students; whether there have been changes in opportunities for parents to provide input or feedback since the introduction of school choice policies; and opinions about school choice policies.

With respect to analyzing the interview data, all the interviews were audio-taped and transcribed, and a commercial computer-based qualitative coding program, NVivo, was used to code all of the data. Using NVivo, emerging ideas and concepts from the data were coded into free nodes that could be compared and related to each other, forming larger "parent" nodes that could be stored in an index system that brought the different components of the project together. These interviews made it possible to compare the differences between the two districts and between school administrators and teachers.

Based on the interviews with school administrators and teachers, this study found that educators did not seem to respond to competition in the ways that the classical economics perspective predicted. First, educators in the losing district believed that they were losing students to neighboring districts because neighboring districts were located in more affluent communities and had better facilities than their district. As a result, schools that were losing students would not be expected to make efforts to improve their teaching quality. Educators in the losing district might not have had appropriate strategies to keep their district's students from leaving for other districts.

Second, educators in both the losing and the gaining districts did not seem to spend much time examining the reasons why they were losing students, what kinds of students came to their districts and left for other districts, and what strengths their competitors had. School principals and teachers felt that it was the responsibility of the central office to attract students to their schools. This implies that administrators and teachers did not invest enough resources in making strategic plans to win competition. In both districts, advertising their programs seemed to be the sole strategies for attracting or maintaining student enrollment.

Third, the compensation and hiring/firing systems for educators were not consistent with market approaches. The changing enrollments affected job security, especially for less experienced teachers, because more experienced teachers were protected by seniority rules. Teacher salaries or benefits were not affected by the enrollment changes because of union contracts. The districts did not have appropriate systems for screening out poor quality teachers.

Fourth, there were mixed responses about whether school choice programs motivated teachers to be more responsive and improve their teaching. While some participants reported that educators were motivated by work ethics or their own intrinsic values rather than competition among schools or teachers, others responded that competition among schools was an incentive to improve their practices.

Finally, community support in the gaining district seemed to be weakened due to increasing choice students. The community members were reluctant to invest in schools for choice students. In the gaining district, there were many people who did not understand why they should attract choice students given that the parents of choice

students didn't pay taxes to maintain or renovate schools. These individuals believed that since choice students were using schools in their community, their parents should have helped pay for the schools. But, instead, individuals who lived in the community were the ones who were expected to pay for school renovations because the community could not use state appropriations to build new schools or renovate them. The superintendent reported that it was hard to gain support among community members for increased spending on schools. Market competition might also have reduced collaboration among districts because they may have felt that their programs and marketing skills were business secrets.

Sampling and Response Rates

With respect to the sampling of participants for my dissertation study, I first did location sampling (Heckathorn, 2002), assuming that school administrators and teachers in districts with drastic changes in enrollment due to school choice policies would be more responsive to such policies than other districts. Multiple districts that were faced with drastic changes in enrollment from 2004 to 2008 due to school choice policies were identified by analyzing the Michigan Department of Education Single Record Student Database.

For the surveys, seven school districts in Michigan were selected from four areas (see Table 3-1). By the time of this study, three of these were districts that had gained students from neighboring school districts and four were districts that had lost students to neighboring districts. For example, while school district A attracted about 28% of its total enrollment from neighboring school districts, school district G lost about 19% of its enrollment to neighboring school districts. The percentage of student enrollment changes

between 2004-2005 and 2008-2009 varied from -28% to 5% across the school districts. The percentage of students eligible for free and reduced lunch in the districts ranged from 13% to 77%. The percentage of minority students in the districts varied from 2% to 67%.

Table 3-1: School District Characteristics

School Districts	Total Enrollment (2008-2009)	%Enrollment Change (2004-2005 to 2008-2009)	%Free/Reduced Lunch (2008-09)	%Net Choice Students (2008-2009)	%Minority (2008-2009)
A	2,433	5.19	36.87	27.78	3.74
B	4,102	-1.75	14.31	10.65	29.06
C	2,871	1.34	33.37	20.38	6.37
D	1,802	-7.11	41.84	-4.94	2.28
E	6,351	-6.27	70.10	-16.34	47.80
F	4,766	-5.47	12.76	-6.67	37.94
G	1,997	-27.91	76.82	-18.58	67.35

Note. %Enrollment Change=(Enrollment in 2008-2009 – Enrollment in 2004-2005)/Enrollment in 2004-2005 * 100. %Net Choice Students = (Incoming Choice Students in 2008-2009 – Outgoing Choice Students in 2008-2009)/Enrollment in 2008-2009 * 100.

Thirty schools in the seven school districts were selected. Depending on the school level, 10 to 20 teachers and administrators in each school were selected. The participants in each school were randomly selected among teachers who taught in the core content areas: elementary education, English/language arts, mathematics, science, and social studies. I selected core content area teachers because of the following two reasons. One is that all the schools have core content area teachers, so it is possible that the teacher groups in the sample are quite similar in terms of the subject matters they teach. The other is that parents could be assumed to be more sensitive to the quality of instruction of core content areas, including language arts and mathematics, than other elective courses when they choose schools for their children. As shown in the Table 3-2, surveys were administered to 49 school administrators and 552 teachers in spring 2009.

Among them, 32 school administrators and 332 teachers participated in the surveys, thus response rates were 65% for administrators and 60% for teachers.

Table 3-2: Survey Sample and Response Rates

	School	Response/Target		Response Rates	
		Admin.	Teacher	Admin.	Teacher
Gaining School Districts					
Elementary	5	3/5	42/70	60.0	60.0
Middle	4	8/8	47/78	100.0	60.3
High	3	6/8	59/87	75.0	67.8
Losing School Districts					
Elementary	11	7/12	93/162	58.3	57.4
Middle	4	6/10	52/85	60.0	61.2
High	3	2/6	36/70	33.3	51.4
Anonymous			3		
Total	30	32/49	332/552	65.3	60.1

As shown in Table 3-3, female teachers accounted for 78% of the teacher participants. Teachers with more than 13 years experiences in their current schools made up 31.6% of the participants, teachers with 9-12 years of experience accounted for 21.3%, teacher with 4-8 years made up 30.6%, and teachers with 3 years of experience or less accounted for 16.6%. About 6% of teachers in the survey had worked less than 1 year in their current schools.

Table 3-3: Teacher Characteristics

	Gaining School Districts	Losing School Districts	Total
Gender			
Female	110	124	234
	77.5%	78.5%	78.0%
Male	32	34	66
	22.5%	21.5%	22.0%
Total	142	158	300
	100.0%	100.0%	100.0%
Work Years in Current School			
1 year	5	14	19
	3.5%	8.8%	6.3%
2-3 years	15	16	31
	10.6%	10.0%	10.3%
4-8 years	52	40	92
	36.9%	25.0%	30.6%
9-12 years	30	34	64
	21.3%	21.3%	21.3%
More than 13 years	39	56	95
	27.7%	35.0%	31.6%
Total	141	160	301
	100.0%	100.0%	100.0%

As indicated in Table 3-4, female administrators accounted for 42% of the participants in the administrator survey. About 45% of the administrators had worked less than 3 years in their current schools. Administrators with more than 13 years experiences in their current schools made up 22.6% of the participants, those with 9-12 years of experience accounted for 16.1%, and those with 4 to 8 years made up 16.1%.

Table 3-4: Administrator Characteristics

	Gaining School Districts	Losing School Districts	Total
Gender			
Female	5	8	13
	31.3%	53.3%	41.9%
Male	11	7	18
	68.8%	46.7%	58.1%
Total	16	15	31
	100.0%	100.0%	100.0%
Work Years in Current School			
1-3 years	6	8	14
	37.5%	53.3%	45.2%
4-8 years	3	2	5
	18.8%	13.3%	16.1%
9-12 years	2	3	5
	12.5%	20.0%	16.1%
More than 13 years	5	2	7
	31.3%	13.3%	22.6%
Total	16	15	31
	100.0%	100.0%	100.0%

Both electronic and hard copy surveys were administered to school administrators and teachers. To ensure high response rates, I employed a five contact approach (Dillman, 2007). This method included sending each eligible administrator and teacher 1) an initial letter introducing the study; 2) a cover letter, a consent form, a link to the electronic survey, and a token incentive; 3) a postcard reminding eligible participants about the survey/thank you letter to those who completed the survey; 4) a second mailing of the cover letter, consent form, and electronic survey link to those who had not yet responded; and e) a final contact (hard copy survey with return envelope to those who had not yet responded). For those who did not have access to the electronic version of the surveys, hard copy surveys were sent in the final contact. The five contacts (a through e) took

place about ten days apart from each other between March to May in 2009. At each step (i.e., after each contact), about 15 to 20 percentage of the remaining sample completed the survey.

Key Constructs of Surveys and Interviews

The survey instruments for teachers and administrators consisted of four key constructs: 1) Teacher Working Conditions, 2) Teacher (Leadership) Practices and Beliefs, 3) Perceptions of and Responses to School Choice, and 4) Demographics (see Table 3-5). The items for evaluating Teacher Working Conditions included questions about available time and resources for teachers, teacher empowerment, leadership, collegial support, opportunities for professional development, and perceptions of school problems. The items for examining Teacher or Leadership Practices and Beliefs included questions about teaching practice, general beliefs about student ability and accountability, participation in professional development, time commitment, and satisfaction.

The items for examining Perceptions of and Responses to School Choice included questions about acquiring information about student enrollment; changes in enrollment and awareness of such changes; information about choice students; impact of enrollment changes on teachers'/administrators' job security, salary, and benefits; and reasons behind the enrollment changes. In addition, these items also included evaluation of their own schools in terms of competitiveness, endeavors at their schools to attract students, evaluation of the endeavors, impact of school choice programs on teachers, and impact of school choice programs on their schools. The items for Demographics included working experiences, tenure, education, certification, race/ethnicity, and school level (see Table 3-2 and see Appendices 1 and 2).

Table 3-5: Key Constructs of Teacher and Administrator Surveys

Teacher Survey	Administrator Survey
Teacher Working Conditions - Available time for teachers (B1) - Available resources for teachers (B2) - Empowerment (B3) - Leadership (B4) - Collegial support (B5) - Professional development (B6) - Perceptions about school problems (sources of problems/teacher belief) (B7 and B8)	Teacher Working Conditions - Available time for teachers (B1) - Available resources for teachers (B2) - Empowerment (B3) - Leadership (B4) - Collegial support (B5) - Professional development (B6) - Barriers to the dismissal of poor-performing teachers (B7) - Perceptions about school problems (sources of problems/teacher belief) (B8 and B9)
Teacher Practice and Beliefs - Teaching practice (C1) - General beliefs about student ability (C2) - General beliefs about accountability (C3) - Participation in professional development (C4) - Time commitment (C5 and C6) - Job satisfaction (C7)	Satisfaction and Commitment - Job satisfaction (B10) - Time commitment (B11 and B12)
School Choice - Acquiring student enrollment information (D1) - Changes in enrollment and awareness of them (D2 and D3) - Information about choice students (D4) - Impact of enrollment changes on teachers' job security, salary, and benefits (D5) - Reasons for parents' school decisions (D6) - Evaluation of their own schools in terms of competitiveness (D7) - Endeavors at the school to attract students (D8) - Evaluation of the endeavors (D9) - Impact of school choice programs on teachers (D10) - Impact of school choice programs on school (D11)	School Choice - Acquiring student enrollment information (C1) - Changes in enrollment and awareness of them (C2 and C3) - Information about choice students (C4) - Impact of enrollment changes on his/her own job security, salary, and benefits (C5) - Impact of enrollment changes on staff members' job security, salary, and benefits (C6) - Reasons for parents' school decisions (C7) - Evaluation of their own schools in terms of competitiveness (C8) - Endeavors at the school to attract students (C9) - Evaluation of the endeavors (C10) - Impact of school choice programs on teachers (C11) - Impact of school choice programs on school (C12)
Demographics - Working years - Tenure - Education - Certification - Ethnicity - School level	Demographics - Working years - Education - Certification - Ethnicity - School level

The survey items for Teacher Working Conditions, Teacher Practices and Beliefs, and Demographics were drawn from the 2007-08 Schools and Staffing Survey (SASS) of the National Center for Education Statistics (NCES) and the Arizona Teacher Working

Conditions Survey, conducted by the Center for Teaching Quality (Berry, Fuller, & Williams, 2007). The items for Perceptions of and Responses to School Choice Programs were created for this study based on the interviews with school administrators and teachers. The validity of the survey items was tested with four teachers and two school administrators from gaining and losing school districts that were not participating in the dissertation study.

Analysis Scheme

Statistical Models

First, exploratory factor analyses were conducted to see if making one composite score for each construct of teachers' working conditions could be justified. The factor analyses showed that sub items of each construct were well correlated and could be composited into one score. In addition, in order to check the internal consistency among the sub items for each construct, Cronbach's alpha coefficients were calculated. The Cronbach's alpha coefficients ranged from .733 to .926, showing very good reliability (see Table A3 in Appendix C).

Second, to see overall trends, the mean scores of all responses, those for losing school districts, those for gaining school districts, those for teachers, and those for administrators for the variables of interest were calculated, ignoring clustering of educators within schools. Then, because of the multilevel nature of the survey data (i.e., teachers were nested in schools), hierarchical (generalized) linear modeling (H(G)LM) analyses were employed to examine the statistical differences between gaining and losing school districts, across school levels, between administrators and teachers, between

female and male educators, and between tenured and non-tenured educators with respect to the following:

- awareness of enrollment changes from 2004-05 to 2008-09 at their schools
- awareness of the percentage of choice students at their schools in 2008-09
- perceptions of the impact of changes in enrollment on educators' job security, salaries, and benefits
- perceptions of teachers' working conditions
- perceptions of school activities for attracting more students
- perceptions of school problems
- perceptions of school choice reasons
- perceptions of the impact of school choice programs on educators' practices
- perceptions of the impact of school choice programs on schools

Then, I conducted hierarchical (generalized) linear modeling (H(G)LM) to test the following associations:

- between educators' perceptions of job security, salaries, and benefits and their awareness of student enrollment changes from 2004-05 to 2008-09 at their schools
- between educators' perceptions of job security, salaries, and benefits and the percentage of choice students in 2008-09 at their schools
- between competition among schools and teachers' working conditions
- between school competition and school activities for attracting more students
- between school problems and school activities for attracting more students
- between choice reasons and school activities for attracting more students

- between school competition and educators' perceptions of the impact of school choice programs on their practices
- between school competition and educators' perceptions of the impact of school choice programs on schools and education

The detailed models were illustrated in the related parts. Position (administrators or teachers) at the individual level was included as control variables. At the school level, the following variables were included as explanatory or control variables depending on research questions: *the gaining or losing status of school districts, student enrollment changes over the past five years, the percentage of choice students, the student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch, the percentage of minority students*, and *school level.* See Table 3-6 for school-level variable descriptive statistics.

Table 3-6: School-Level Variable Descriptive Statistics

	N	Min.	Max.	Mean	S.D.
Enrollment Changes from 2004-05 to 2008-09	30	-45.9	66.0	-3.9	17.8
% of Choice Students in 2008-09	30	.0	41.0	14.1	11.9
Student/Teacher Ratio in 2008-09	30	15.5	23.9	20.2	2.2
School Size (100 students) in 2008-09	30	1.3	15.5	5.3	3.4
Local Funding ($100) in 2006-07	30	13.9	52.3	29.5	12.7
% of Students Eligible for Free or Reduced Lunch in 2008-09	30	6.4	82.9	38.6	23.6
% of Minority Students in 2008-09	30	.0	69.1	23.0	21.6

In this study, statistical significance was determined at the P value equal to or less than 0.10. Each coefficient in the results has information about statistical significance denoted by *** $P \leq 0.01$, ** $P \leq 0.05$, or * $P \leq 0.10$.

Regarding the outcome variables for teachers' working conditions which are in continuous scale, intra-class correlation coefficients (ICCs) were calculated to determine

whether there was enough variance among schools to employ multilevel modeling. As shown in Table A4 in Appendix D, the ICCs ranged from .20 to 54, which meant that school-level variance accounted for 30% to 54% of the total variance in educators' perceptions of teachers' working conditions. We could say that there is a non-negligible nesting effect.

Missing Data

The missing rate for the administrator survey was less than 5%, and that for the teacher survey ranged from 5% to 16% depending on the items. There were more missing data for the items on the last section of the survey. Overall, the survey data had a monotone missing pattern where in the event that a variable Y_j was missing for the individual *i*, the individual *i* was missing all subsequent variables Y_k, k>j (Horton & Kleinman, 2007).

Relatively more teachers at losing schools than those at gaining schools were in the missing group whose members did not respond to most items on the last parts of the survey. The differences between the missing group and total sample seemed to be small. There were almost no differences between the two groups with respect to their perceptions of teachers' working conditions which were addressed in the first part of the surveys (see Table A5 in Appendix E). In addition, little differences were found between the two groups regarding the impact of student enrollment increases/decreases on teachers' job security, benefits, and salary which were addressed in the last part of the survey. In sum, the data sets seemed to be missing data at random (MAR).

There could be many methods for the analysis of incomplete data regression models such as the complete case model, ad-hoc methods, multiple imputation,

likelihood-based approaches, weighting methods, and Bayesian approaches (Horton & Kleinman, 2007). Among them, I used the simplest method: the complete case method, which involved the analysis of the set of observations with no missing values because the data sets in this study were close to missing at random and had monotone missing patterns. When missing data is missing completely at random (MCAR), then the complete case (CC) estimator is unbiased. The main drawback of the CC estimator is that if there are many different variables with missing values, then a large fraction of the observations may be dropped. However, since the data sets in this study had monotone missing patterns, dropping missing values did not substantially increase the proportion of the observations that were excluded from analyses due to this method.

CHAPTER 4

AWARENESS OF ENROLLMENT CHANGES

In order to improve school quality through school choice programs, school administrators and teachers should know about student enrollment changes in their schools, and then they should employ appropriate actions to reach the optimal number of students in their schools. It might be assumed that educators would know about student enrollment changes once school choice programs are put in place. That might be one reason why there have been few research studies about educators' awareness of student enrollment changes. Paying attention to social institution, human beliefs, and humans' limited information processing capacity, however, the institutional and behavioral economics (IBE) theory leads us to attend to educators' awareness and beliefs with regard to school choice policies. Whether teachers know about student enrollment changes is a question not to be assumed but to be examined. To address that, this chapter addresses the following Research Question 1: *How much are teachers and school administrators aware of changes in enrollment? Do schools have incentive systems aligned with decreases or increases in student enrollment?*

With respect to factors affecting educators' awareness of enrollment changes, the neoclassical economics (NCE) perspective would posit that educators, as rational actors, would know about student enrollment changes when the awareness of the changes and doing something, if needed, affect their benefits. For example, when there are rewards or sanctions for student enrollment changes, educators would be aware of enrollment

changes. In addition, educators would be more likely to know about student enrollment changes when they are affected by rewards or sanctions more seriously.

Both the NCE perspective and the IBE perspective agree that educators are more likely to know about student enrollment changes when they are significantly affected by rewards or sanctions more seriously. However, the IBE perspective implies that educators attach different meanings to the rewards or sanctions depending on their values or belief systems. As a result, the same rewards or sanctions could make some educators more sensitive than others to enrollment changes.

Based on the NCE and IBE perspectives, this study generates the following two research hypotheses and tests them.

Hypothesis 1a (NCE): When there are rewards or sanctions for student enrollment changes, educators would be aware of enrollment changes. In addition, the degree of educators' awareness of student enrollment changes (or the percentage of choice students) at their schools would be positively associated with the degree of the impact of student enrollment changes on them.

Hypothesis 1b (IBE): Educators attach different meanings to the rewards and sanctions depending on their values or belief systems. Thus, the impact of the rewards and sanctions would be different among educators in a school. As a consequence, the same rewards or sanctions could make some educators more sensitive than others to enrollment changes.

In the following sections, I first address whether educators knew about student enrollment changes from 2004 to 2008 and whether they knew about the percentage of choice students in their schools. Second, I analyze how educators' job security, salaries,

and benefits were affected by student enrollment changes. Finally, I examine the associations between rewards or sanctions and teachers' awareness of enrollment changes.

Educators' Awareness of Enrollment Changes and the Percentage of Choice Students

To examine whether administrators and teachers knew about student enrollment changes from 2004 to 2008 at their schools, they were asked to mark one among the following choices: *no change (in enrollment), less than 10% increase, 10% to 20% increase, 20% to 30% increase, more than 30% increase, less than 10% decrease, 10% to 20% decrease, 20% to 30% decrease, more than 30% decrease,* and *don't know.*

In addition, to explore whether administrators and teachers correctly knew about the percentage of choice students in 2008-09 at their schools, they were asked to mark one among the following choices: *none, less than 10%, 10% to 20%, 20% to 30%, more than 30%,* and *don't know.*

To check whether administrators and teachers have accurate information, I rescored their answers compared to the actual changes at their schools. Correct answers were coded as 1, otherwise 0. Those who marked *do not know* were coded as 0. To provide some margin for errors, I considered choices within +/- 5% as correct. For example, if student enrollment increased by 7% during the past five years, both *less than 10% increase* and *10 to 20% increase* were treated as correct answers.

As shown in Table 4-1, many educators did not know about recent student enrollment changes. About 73% of the teachers and 45% of the administrators did not provided correct answers about student enrollment changes at their schools.

Administrators were more likely than teachers to know about student enrollment changes. Note that the sample size for the administrator survey is small (N=31).

Table 4-1: Educators' Awareness of Student Enrollment Change

	Wrong	Correct	Total
Teachers (N=315)	72.7%	27.3%	100.0%
Administrators (N=31)	45.2%	54.8%	100.0%

In addition, educators generally did not know correctly about the percentage of choice students at their schools. As indicated in Table 4-2, about 56% of the teachers and 26% of the administrators did not have correct perceptions of the percentage of choice students at their schools. Similar to student enrollment changes, administrators were more likely to know about the percentage of choice students in their schools. These differences between administrators and teachers seem to result from their different positions. Since one of the main jobs administrators are responsible for is school management, they would be in a better position to know about enrollment changes. Even though higher percentages of administrators than teachers knew about both student enrollment changes and the percentage of choice students, the proportion of administrators who did not provide accurate information about those changes appears to be rather high, considering their supposed role. The findings about educators' awareness imply that changes in student enrollment due to school choice policies fail to signal to educators that they should respond to decreasing or increasing student enrollment.

Table 4-2: Awareness of the Percentage of Choice Students

	Wrong	Correct	Total
Teachers (N=313)	56.2%	43.8%	100.0%
Administrators (N=31)	25.8%	74.2%	100.0%

Differences between Subgroups

In order to check whether educators' awareness of enrollment changes and the percentage of choice students at their schools were statistically different among subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical generalized linear models. Two outcome variables were included in the analyses. One was whether educators provided accurate information about student enrollment changes at their schools from 2004 to 2008. The other was whether educators provided accurate information about the percentage of choice students at their schools. Both of them are binary variables. Each regression had one outcome variable and a common set of explanatory variables. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school. Position, tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

$$\text{Prob}(Y=1|B) = P$$
$$\log[P/(1-P)] = B0 + B1*(\text{ADMINIST}) + B2*(\text{MALE}) + B3*(\text{NONTENUR})$$

Y1 = Awareness of Student Enrollment Change over the Past Five Years
Y2 = Awareness of Percentage of Choice Students

Level-2 Model

$$B0 = G00 + G01*(\text{LOSING}) + G02*(\text{MIDDLE}) + G03*(\text{HIGH}) + U0$$
$$B1 = G10 + U1$$
$$B2 = G20 + U2$$
$$B3 = G30 + U3$$

As shown in Table 4-3, there was no statistically significant difference between gaining and losing school districts with regard to educators' awareness of student

enrollment changes. Educators at middle schools were more likely than those at elementary schools to know about student enrollment changes at their schools. No significant difference was found between elementary and high school educators. Educators at high schools were less likely than those at middle schools to know about student enrollment changes at their schools.[3] At the individual level, administrators were more likely than teachers to know about enrollment changes at their schools. Male educators were more likely than female educators to know about them. There was no significant difference between tenured and non-tenured educators.

Table 4-3: Differences between Subgroups in *Awareness of Student Enrollment Changes*

	Coefficient	Odds Ratio	S.E.	P.Value
Intercept, B0	-1.239***	0.248	0.345	0.001
Level 2				
Losing Districts	0.103	1.109	0.301	0.735
Middle School	0.732**	2.079	0.352	0.047
High School	-0.046	0.955	0.393	0.909
Level 1				
Administrators	0.903*	2.466	0.510	0.087
Male	0.679*	1.972	0.347	0.060
Non-tenured	-0.353	0.703	0.431	0.420
N	329			

Note. *** P≤0.01; ** P≤0.05; * P≤0.10

As shown in Table 4-4, there is significant unexplained variance in the intercept for the three level-2 predictors. The slope parameters for administrator (vs. teacher), male (vs. female), and non-tenured educator (vs. tenured educator) do not have any error variances significantly different from zero.

[3] To examine the statistical differences between middle and high school educators, another analysis was conducted in which middle school was set as a reference group. The resulting coefficient for high school in the analysis was -0.777 with the P-value of 0.049.

Table 4-4: Variance Components in the Differences between Subgroups in *Awareness of Student Enrollment Changes*

	S.D.	Variance Component	df	Chi-square	P-value
INTRCPT1, U0	0.658***	0.433	8	24.030	0.003
ADMINIST slope, U1	1.280	1.637	11	14.433	0.209
MALE slope, U2	0.784	0.615	11	16.026	0.140
NONTENUR slope, U3	0.772	0.596	11	12.289	0.342

Note. *** P≤0.01; ** P≤0.05; * P≤0.10

As Table 4-5 indicated, no significant differences were found between gaining and losing school districts, between elementary and middle schools, between elementary and high schools, or between middle and high schools[4] with regard to educators' awareness of the percentage of choice students at their schools. There was a significant difference between administrators and teachers. Administrators were more likely than teachers to know about the percentage of choice students at their schools. I did not find significant differences between female and male educators and between tenured and non-tenured educators.

Table 4-5: Differences between Subgroups in *Awareness of the Percentage of Choice Students*

	Coefficient	Odds Ratio	S.E.	P.Value
Intercept, B0	0.028	1.029	0.343	0.934
Level 2				
Losing Districts	-0.350	0.705	0.340	0.314
Middle School	-0.242	0.785	0.394	0.544
High School	-0.096	0.909	0.430	0.826
Level 1				
Administrators	1.145**	3.141	0.523	0.037
Male	0.428	1.535	0.296	0.159
Non-tenured	-0.198	0.820	0.340	0.564
N	327			

Note. *** P≤0.01; ** P≤0.05; * P≤0.10

[4] To examine the statistical differences between middle and high school educators, another analysis was conducted in which middle school was set as a reference group. The resulting coefficient for high school in the analysis was -0.146 with the P-value of 0.753.

As shown in Table 4-6, there is significant unexplained variance in the intercept for the three level-2 predictors. The slope parameters for administrator (vs. teacher), male (vs. female), and non-tenured educator (vs. tenured educator) do not have any error variances significantly different from zero.

Table 4-6: Variance Components in the Differences between Subgroups in *Awareness of the Percentage of Choice Students*

	S.D.	Variance Component	df	Chi-square	P-value
INTRCPT1, U0	0.635	0.404	8	15.451	0.050
ADMINIST slope, U1	1.152	1.327	11	12.841	0.303
MALE slope, U2	0.178	0.032	11	9.873	>.500
NONTENUR slope, U3	0.453	0.206	11	11.496	0.403

Educators' Job Security, Salaries, and Benefits

In order for educators to respond to student enrollment changes due to school choice programs, educators' job security, salaries, and benefits would need to be affected by student enrollment changes. To examine this, administrators and teachers were asked to indicate the degree to which changes in student enrollment affected them in terms of job security, salary, and benefits respectively. They could indicate one of the following five choices: *1=not at all, 2=to some extent, 3=to a moderate extent, 4=to a great extent, and 5=not sure.* For the analyses, the responses with *5=not sure* were excluded. The results suggest that public school choice policies did not prompt school districts to create market incentives for educators.

Teachers

In terms of job security, salaries, and benefits, more than two-thirds of teachers responded that they were not affected by changes in student enrollment at all or they were affected only to some extent (see Table 4-7). In addition, teachers appeared to be more affected in terms of job security than salary or benefits by student enrollment changes. It

is also notable that teachers in a school were affected differently by student enrollment changes. For example, in terms of job security, at school 131[5], while 62% of teachers responded that they were not affected by student enrollment at all, 23% of teachers responded that they were affected to a great extent. With regard to salary, at school 111, 44.4%, 22.2%, 11.1%, and 22.2% of the teachers responded that they were affected by student enrollment changes *not at all, to some extent, to a moderate extent,* and *to a great extent* respectively. Regarding benefits, at school 132, 30.8%, 15.4%, 30.8%, and 23.1% of the teachers responded that they were affected by student enrollment changes *not at all, to some extent, to a moderate extent,* and *to a great extent* respectively (see Tables A6-1, A6-2, and A6-3 in Appendix F).

Table 4-7: Impact of Student Enrollment Changes on Teachers (%)

	1 Not at all	2 Some extent	3 Moderate extent	4 Great extent	Total
Job security (n=305)	50.2	21.0	10.8	18.0	100.0
Salary (n=295)	44.7	21.0	11.5	22.7	100.0
Benefits (n=298)	40.9	22.1	14.4	22.5	100.0

Administrators

More than 60% of administrators responded that changes in student enrollment affected their job security, salaries, and benefits either *not at all* or only *to some extent* (see Table 4-8). Administrators appeared to be more affected in terms of *salaries* and *benefits* than *job security.*

Table 4-8: Impact of Student Enrollment Changes on Administrators (%)

	1 Not at all	2 Some extent	3 Moderate extent	4 Great extent	Total
Job security (n=32)	31.3	31.3	18.8	18.8	100.0
Salary (n=31)	41.9	29.0	16.1	12.9	100.0
Benefits (n=31)	35.5	32.3	19.4	12.9	100.0

[5] For confidentiality, a series of numbers were assigned to schools in the surveys

Differences between Subgroups

To examine whether educators' perceptions of job security, salaries, and benefits were statistically different among subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical generalized linear models. Three outcome variables were included in the analyses: Job Security, Salary, and Benefits. The outcome variables were in ordinal scale. Each regression had one outcome variable and a common set of explanatory variables. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school. Position*, *tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0
where
P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

Y1 = Job Security
Y2 = Salary
Y3 = Benefits

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(3)

Level-2 Model

$$B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0$$
$$B1 = G10 + U1$$
$$B2 = G20 + U2$$
$$B3 = G30 + U3$$

In terms of educators' perceptions of effects on job security, educators in losing school districts were more likely than those in gaining school districts to be affected by student enrollment changes (see Table 4-9). There were no significant differences between elementary and middle schools and between elementary and high schools. At the individual level, administrators were more likely than teachers to be affected. No significant differences were observed between female and male educators. Non-tenured educators were more likely than tenured educators to be affected.

Table 4-9: Differences between Subgroups in Educators' Perceptions of Job Security

	Coefficient	Odd Ratio	S.E.	P.Value
Level 2				
Losing Districts	0.900*	0.407	0.502	0.084
Middle School	0.307	0.736	0.593	0.609
High School	0.097	0.908	0.629	0.880
Level 1				
Administrators	1.201***	0.301	0.381	0.004
Male	0.157	0.855	0.298	0.601
Non-tenured	1.980***	0.138	0.379	0.000
N				

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

With regard to educators' perceptions of effects on salaries, no significant differences were observed among subgroups of interest in this study (see Table 4-10). In particular, no significant differences were observed between administrators and teachers. This might be related to similar schedules across different teacher union contracts.

Table 4-10: Differences between Subgroups in Educators' Perceptions of Salary

	Coefficient	Odd Ratio	S.E.	P.Value
Level 2				
Losing Districts	0.696	0.499	0.464	0.145
Middle School	0.259	0.772	0.532	0.630
High School	0.101	0.904	0.589	0.866
Level 1				
Administrators	-0.107	1.113	0.389	0.785
Male	0.277	0.758	0.281	0.332
Non-tenured	-0.624	1.866	0.378	0.109
N				

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Regarding educators' perceptions of benefits, there were no significant differences between gaining and losing school districts, between elementary and high schools, between administrators and teachers, or between female and male educators. However, statistically significant differences were observed between elementary and middle schools and between tenured and non-tenured educators. Educators at middle school were more likely than those at elementary schools to be affected. Non-tenured educators were less likely than tenured educators to be affected (see Table 4-11).

Table 4-11: Differences between Subgroups in Educators' Perceptions of Benefits

	Coefficient	Odd Ratio	S.E.	P.Value
Level 2				
Losing Districts	0.608	0.545	0.386	0.127
Middle School	0.781*	0.458	0.458	0.100
High School	0.074	0.928	0.492	0.881
Level 1				
Administrators	-0.388	1.475	0.431	0.375
Male	0.284	0.753	0.286	0.329
Non-tenured	-0.875**	2.399	0.413	0.043
N				

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Association between Educators' Perceptions of Job Security, Salary and Benefits and their Awareness of Student Enrollment Changes and the Percentage of Choice Students.

Two-level hierarchical generalized liner models (HGLM) were conducted to explore whether the impact of student enrollment changes on administrators and teachers in terms of job security, salary, and benefits was associated with educators' awareness of a) student enrollment changes or b) the percentage of choice students in their schools. To this end, two outcome variables were included in the analyses. One outcome variable was whether teachers knew about student enrollment changes at their schools; another was whether teachers knew about the percentage of choice students at their schools. These were binary variables (Y=1 if a teacher knew correctly about enrollment changes or the percentage of choice students at his/her school, Y=0 if not). Major explanatory variables were the degree of teachers' perceptions of the impact of student enrollment changes on their job security, salary, and benefits, respectively.

There were two models for each outcome variable. Model 1 for each outcome variable examined the relationship between the outcome variable and the explanatory variable with only two control variables added to the model. These two variables were *the gaining or losing status of school districts at the school level* and *position at the individual level.* The following additional variables at the school level were added in Model 2 for each outcome variable: *student enrollment changes over the past five years, the percentage of choice students, student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch, and the percentage of minority students*. These additional variables in Model 2 allow us to examine the impact of

competition among schools and socioeconomic characteristics of schools on educators' awareness of student enrollment changes and the percentage of choice students.

Level-1 Model

Prob(Y=1|B) = P
log[P/(1-P)] = B0 + B1*(ADMINIST) + B2*(D5)

Y1 = Awareness of Student Enrollment Change over the Past Five Years
Y2 = Awareness of Percentage of Choice Students

D5-1 = Job Security
D5-2 = Salary
D5-3 = Benefits

Level-2 Model

Model 1
B0 = G00 + G01*(LOSING) + U0
B1 = G10 + U1
B2 = G20 + U2

Model 2
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + G04*(TSRATIO) + G05*(SCHSIZE) + G06*(LOFUND) + G07*(FRL) + G08*(MINORITY) + U0
B1 = G10 + U1
B2 = G20 + U2

Noticeably, as indicated in Table 4-12, *the degree of impact of student enrollment changes on educators with regard to job security, salary, and benefits* was not significantly associated with their awareness of student enrollment changes. In addition, the gaining or losing status of school districts, the degree of student enrollment changes, and the percentage of choice students in a school did not seem to make educators aware of student enrollment changes. There was no significant association between educators' awareness of student enrollment changes and the factors. Finally, socioeconomic characteristics of schools (such as the amount of local funding, the percentage of students

eligible for free and reduced lunch, and the percentage of minority students) were not associated with educators' awareness of student enrollment changes.

As indicated in Table 4-13, *the degree of impact of student enrollment changes on educators with regard to job security, salary, and benefits* was not significantly associated with *their awareness of the percentage of choice students in their schools.* In addition, the *gaining or losing status of school districts, the degree of student enrollment changes,* and *the percentage of choice students in a school* did not seem to make teachers *aware of the percentage of choice students.* There was no significant association between *educators' awareness of the percentage of choice students in their schools* and *the factors.* Finally, socioeconomic characteristics of schools (such as the amount of local funding, the percentage of students eligible for free and reduced lunch, and the percentage of minority students) were not associated with educators' awareness of the percentage of choice students at their schools.

Table 4-12: Associations between Educators' Job Security, Salary, and Benefits and their Awareness of Enrollment Changes

	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	S.E	Coeff.	S.E	Coeff.	S.E	Coeff.	S.E	Coeff.	S.E	Coeff.	S.E
Job Security	-0.086	0.134	-0.095	0.145								
Salary					-0.121	0.112	-0.215*	0.125				
Benefits									-0.058	0.115	-0.123	0.126
Administrators	1.230**	0.274	1.278**	0.495	1.122**	0.274	1.213**	0.516	1.142**	0.274	1.222**	0.528
Losing Districts	-0.069	0.488	-0.110	0.779	0.036	0.488	0.052	0.767	0.006	0.500	0.081	0.767
% of Enrollment Changes			-0.016	0.014			-0.022	0.013			-0.021	0.013
% of Choice Students			0.021	0.030			0.028	0.029			0.025	0.028
Student/Teacher Ratio			0.024	0.089			-0.010	0.089			-0.009	0.089
School Size			0.045	0.056			0.055	0.056			0.056	0.056
Local Funding			-0.025	0.022			-0.024	0.022			-0.022	0.022
% of Free and Reduced Lunch			0.000	0.010			-0.004	0.010			-0.002	0.010
% of Minority Students			0.010	0.018			0.008	0.018			0.005	0.018
N	333		333		332		322		325		325	

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Table 4-13: Associations between Educators' Job Security, Salary, and Benefits and their Awareness of the Percentage of Choice Students

	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Job Security	-0.070	0.111	0.001	0.124								
Salary					-0.085	0.111	0.025	0.120				
Benefits									-0.095	0.122	0.022	0.133
Administrators	1.221**	0.485	1.112**	0.546	1.207**	0.500	1.103	0.562	1.292**	0.549	1.180*	0.603
Losing Districts	-0.396	0.295	0.662	0.879	-0.367	0.301	0.794	0.931	-0.311	0.318	0.677	0.980
% of Enrollment Changes			0.009	0.015			0.010	0.016			0.010	0.017
% of Choice Students			0.019	0.035			0.019	0.036			0.013	0.038
Student/Teacher Ratio			-0.059	0.100			-0.097	0.107			-0.081	0.113
School Size			0.037	0.066			0.040	0.071			0.042	0.074
Local Funding			-0.013	0.026			-0.011	0.028			-0.011	0.029
% of Free and Reduced Lunch			-0.002	0.011			0.000	0.012			0.001	0.013
% of Minority Students			-0.023	0.021			-0.027	0.023			-0.027	0.024
N	331		320		323		331		320		323	

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Discussion

First, it is notable that many educators did not know about recent student enrollment changes or the portion of choice students at their schools. More than 72% of the teachers and more than 45% of the administrators did not know about student enrollment changes in their schools. Regarding educators' awareness of the percentage of choice students, about 56% of the teachers and 26% of the administrators did not provide accurate information about these percentages. Even though administrators were more likely than teachers to know about student enrollment changes and the percentage of students at their schools, we could say that a large portion of administrators still did not know about them considering their position where they were in charge of counting the number of students and maintaining school budget. It is important for educators to know about student enrollment changes in that their awareness of the changes could be a signal that they should take appropriate actions to address them.

Second, public schools seem to fail to build market incentives for educators. In terms of job security, salaries, and benefits, more than two-thirds of teachers and administrators responded that they were not affected by changes in student enrollment at all or they were affected only to some extent. This implies that the current incentive systems for educators may have limitations in motivating educators to be aware about student enrollment changes and to improve school quality in order to attract more students.

Third, as the IBE hypothesis expected, in a school where it can be assumed that the same incentive systems are applied to teachers in the school, teachers perceived the degree of effects of student enrollment changes on their job security, salaries, and

benefits differently. This can be explained from the IBE perspective, which takes into account emotions and beliefs. Educators' responses to job security, salaries, and benefits are mediated by emotions like pleasure or pain. However, the key issue is here whether the effects were large enough for an emotional stimulus to motivate educators to take action. In addition, emotions are triggered by beliefs, which provide a meaning and sense of direction to educators. In a given policy context, it is important that schools build incentive systems that impact teachers' job security, salaries, and benefits sufficiently to motivate educators to take action in order to attract more students. In addition, attending to educators' beliefs which provide a meaning and sense of direction to them, policymakers need to inform educators that student enrollment changes are influenced by educators' practices.

Finally, the finding does not support either the NCE or the IBE perspective about the relationship between *the degree of impact of student enrollment changes on teachers' job security, salary, and benefits* and *the degree of their awareness of enrollment changes and the percentage of choice students in their schools. The degree of impact of student enrollment changes on teachers with regard to job security, salary, and benefits* was not significantly associated with *their awareness of student enrollment changes and the percentage of choice students in their schools.* In addition, the degree of competition among schools was not associated with educators' awareness of student enrollment changes and the percentage of choice students. The *gaining or losing status of school districts, the degree of student enrollment changes,* and *the percentage of choice students in a school,* which are indicators of the degree of competition among schools, did not

seem to make teachers *aware of student enrollment changes and of the percentage of choice students at their schools.*

CHAPTER 5

TEACHERS' WORKING CONDITIONS

This chapter addresses the second guiding research question: *How are schools/districts that lose students as part of school choice policies (i.e., losing schools/districts) different from schools/districts that gain students (i.e., gaining schools/districts) in terms of teachers' working conditions such as available time and resources for teachers, leadership, and opportunities for professional development? Are teachers' working conditions associated with the intensiveness of school competition?* Many research studies have shown that teachers are the most important factor for student achievement. Therefore, it is important for schools to maintain good working conditions that will help in recruiting, retaining, and motivating quality teachers(Berry, Smylie, & Fuller, 2008). If school choice programs can contribute to providing better teacher working conditions, that could be one justification of introducing such programs. Regarding this issue, the neoclassical economics (NCE) perspective and the institutional and behavioral economics (IBE) perspective have different expectations.

From the NCE perspective, school administrators would be expected to make an effort to provide better working conditions in order to attract more students to their schools if attracting more students in their schools produces profits for them. In addition, it is assumed that school administrators know the relationship between teachers' working conditions and their performance or commitment to schools and how to provide better working conditions. Parents also would be expected to choose schools which provide better working conditions, because teachers at those schools would serve their children

better. Similar to school administrators, it is assumed that parents know the differences among schools with regard to teachers' working conditions. Finally, as economic actors, educators would balance their effort with resulting profits. This implies that as competition among schools becomes severe, educators would be more likely to make an effort to provide better working conditions, if other conditions are equal.

In contrast to the NCE perspective, the IBE perspective questions whether educators know about the relationship between teachers' working conditions and their performance and how to provide better working conditions. In addition, they question whether educators can calculate the utility of certain measures for providing better working conditions. This implies that educators might overestimate or underestimate the effects of improving teachers' working conditions. When they underestimate such effects, they might not pay attention to teachers' working conditions. For parents, the IBE perspective does not assume that parents have the capacity to appreciate the differences among schools in terms of teachers working conditions. Teachers' working conditions could be categorized as high information goods.

The two competing perspectives lead to different hypotheses as follows with regard to the second research question.

Hypothesis 2a (NCE): Schools in gaining school districts would have better working conditions because rational parents would choose schools with better working conditions and educators would make an effort to provide better working conditions. The degree of the differences in working conditions between gaining and losing schools would be associated with the degree of school competition (i.e., the degree of student

enrollment change). As competition among schools becomes more intensive, schools will make more effort to improve working conditions.

Hypothesis 2b (IBE): There might be no significant difference in teacher working conditions between schools in gaining and losing school districts when educators do not know the importance of teachers' working conditions or when they underestimate the effects of improving teachers' working conditions. In addition, parents might not consider teachers' working conditions when they choose schools for their children. In this case, parental choice would not lead educators to provide better working conditions.

Before I test the two competing hypotheses, I examine the differences between gaining and losing school districts with regard to teachers' working conditions. Then, I use two-level hierarchical linear models to examine whether the degree of school competition is associated with teachers' working conditions.

Educators' Perceptions of Working Conditions

Teachers' Working Conditions were measured with the following six constructs: Use of Time, Facilities and Resources, Empowerment, Leadership, Collegial Support, and Professional Development. Each construct had four to eight sub items. Teachers and administrators were asked to answer the extent to which they agree with statements about teachers' working conditions. Each item had a five-point scale: 1=Strongly agree, 2=Disagree, 3=Neither disagree nor agree, 4=Agree, and 5=Strongly agree. Higher values are interpreted as better teachers' working conditions. For the analyses, sub items in each construct were composited into one mean score.

Teachers

As shown in Table 5-1, in all areas of teacher working conditions, teachers in gaining school districts rated their working conditions higher than those in losing school districts. This finding implies that schools in the gaining districts have better teacher working conditions. Differences in teacher empowerment, leadership, and facilities and resources were relatively larger than differences regarding other working conditions.

Table 5-1: Teachers' Perceptions of Working Conditions

	Both	Gaining	Losing	Diff.
Use of Time	2.87	2.98	2.78	0.20
Facilities and Resources	3.93	4.28	3.62	0.65
Empowerment	3.39	3.82	3.03	0.79
Leadership	3.38	3.77	3.04	0.73
Collegial Support	3.81	3.99	3.65	0.34
Professional Development	3.15	3.24	3.08	0.17

Note. 1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, and 5=strongly agree. Clustering of educators within schools was ignored.

Administrators

Administrators had different perceptions of teachers' working conditions as compared to teachers (see Table 5-2). While teachers in gaining school districts valued their working conditions more favorably in all areas than those in losing school districts, administrators in losing school districts perceived teachers' working conditions more favorably than those in gaining school districts with respect to the following two items: *use of time* and *professional development.*

Table 5-2: Administrators' Perceptions of Working Conditions

	Both	Gaining	Losing	Diff.
Use of Time	3.73	3.65	3.81	-0.17
Facilities and Resources	4.44	4.55	4.31	0.24
Empowerment	4.21	4.39	4.00	0.39
Leadership	4.24	4.43	4.03	0.40
Collegial Support	3.95	4.12	3.76	0.36
Professional Development	3.96	3.91	4.02	-0.10

Note. 1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, and 5=strongly agree. Clustering of educators within schools was ignored.

It is also interesting is that there was a big gap between teachers' and administrators' perceptions of teacher working conditions. As shown in the Table 5-3, administrators in both gaining and losing districts perceived teachers' working conditions more favorably than teachers. Most administrators tended to think that their schools had better working conditions than teachers themselves.

Table 5-3: Differences between Teachers' and Administrators' Perceptions of Teacher Working Conditions

	Gaining (A)			Losing (B)		
	Teachers	Admi.	Diff.	Teachers	Admi.	Diff.
Use of Time	2.98	3.65	-0.67	2.78	3.81	-1.03
Facilities and Resources	4.28	4.55	-0.27	3.62	4.31	-0.69
Empowerment	3.82	4.39	-0.57	3.03	4.00	-0.97
Leadership	3.77	4.43	-0.65	3.04	4.03	-0.99
Collegial Support	3.99	4.12	-0.13	3.65	3.76	-0.11
Professional Development	3.24	3.91	-0.67	3.08	4.02	-0.94

Note. 1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, and 5=strongly agree. Clustering of educators within schools was ignored.

Differences in Subgroups

To examine whether educators' perceptions of working conditions were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical linear models. The outcome variables were the six key constructs of teachers' working conditions. The outcome variables were treated as continuous variables. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school.* In addition, *Position*, *tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

$$Y = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + R$$

Y1 = Use of Time

Y2 = Facilities and Resources
Y3 = Empowerment
Y4 = Leadership
Y5 = Collegial Support
Y6 = Professional Development

Level-2 Model

B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As indicated in Table 5-4, significant differences were found between gaining and losing school districts in terms of the following four key constructs: *facilities and resources, teacher empowerment, leadership,* and *collegial support.* Educators in gaining school districts rated these working conditions more favorably than those in losing school districts. Second, while there were no significant differences between elementary and middle school educators with regard to the six key constructs, educators at high schools rated teachers' working conditions less favorably than those at elementary schools. Third, at the individual level, significant differences were observed between administrators and teachers (with regard to each aspect of working conditions) except for *collegial support.* In general, administrators rated teachers' working conditions more favorably than teachers. Fourth, there were no statistically significant differences between female and male teachers. Finally, non-tenured educators rated the following key constructs more favorably than tenured educators: *use of time, collegial support,* and *professional development.*

Table 5-4: Differences between Groups with regard to Educators' Perceptions of Working Conditions

Dependent Variable	Use of Time		Facil. & Resources		Empowerment		Leadership		Collegial Support		Prof. Devel.	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Level 2												
Losing Districts	-0.109	0.154	-0.542***	0.132	-0.677***	0.219	-0.609**	0.222	-0.349***	0.119	-0.179	0.155
Middle School	-0.090	0.179	-0.042	0.152	-0.153	0.255	-0.307	0.257	-0.145	0.138	-0.231	0.177
High School	-0.061	0.195	-0.241	0.169	-0.461	0.278	-0.445	0.283	-0.584***	0.150	-0.344	0.197
Level 1												
Administrators	0.903***	0.136	0.485***	0.130	0.666***	0.136	0.777***	0.125	0.155	0.111	0.838***	0.138
Male	0.024	0.096	-0.100	0.083	0.041	0.098	-0.078	0.095	-0.004	0.083	-0.073	0.098
Non-tenured	0.482***	0.109	0.113	0.122	0.182	0.128	0.134	0.097	0.176*	0.087	0.252**	0.119
N	324		326		332		332		324		324	

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between Competition among Schools and Teachers' Working Conditions

To examine whether teachers' working conditions were associated with the degree of competition among schools, two-level hierarchical linear regressions were employed. The following six composite scores regarding teachers' working conditions were used as outcome variables: *use of time, facilities and resources, empowerment, leadership, collegial support,* and *professional development.* The degree of competition was measured by *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* In this study, it was assumed that educators in losing school districts and at schools with decreasing student enrollment and smaller percentages of choice students would feel competition to a greater extent than their counterparts.

There were two models for each outcome variable. Model 1 for each outcome variable examined the relationship between the outcome variable and the explanatory variables with only one control variable included in the model. The explanatory variables were *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* As a common control variable for both Model 1 and Model 2, the position variable (administrator or teacher) at the individual level was included. For Model 2, the following control variables at the school level were added in Model 2 for each outcome variable: *student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch,* and *the percentage of minority students.*

Level-1 Model

Y = B0 + B1*(ADMINIST) + R
Y1 = Use of Time
Y2 = Facilities and Resources
Y3 = Empowerment
Y4 = Leadership
Y5 = Collegial Support
Y6 = Professional Development

Level-2 Model

Model 1
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE)
B1 = G10 + U1

Model 2
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + G04*(TSRATIO) + G05*(SCHSIZE) + G06*(LOFUND) + G07*(FRL) + G08*(MINORITY) + U0
B1 = G10 + U1

The results indicate that no aspects of teachers' working conditions except for *facilities and resources* were associated with *the location of the school, student enrollment changes,* or *the percentage of choice students*. This implies that teachers' working conditions are not associated with the intensiveness of competition among schools. Rather, teachers' working conditions seemed to be associated with other control variables (see Table 5-5). First, regarding *use of time*, educators at schools with *higher percentage of free and reduced lunch eligible students* tended to agree that they had available time to meet the educational needs of all students, collaborate with their colleagues, and so on. Second, in terms of facilities and resources, educators in losing school districts were less likely than those at gaining school districts to agree that their schools had sufficient facilities and resources for education. In addition, educators at schools with higher percentage of choice students were less likely to agree. While there were positive associations between *facilities and resources* and *the amount of local*

funding and between *facilities and resources* and *the percentage of students eligible for free and reduced lunch*, there was a negative association between *facilities and resources* and *the percentage of minority students*.

Third, when controlling in Model 1 for associations between school competition and teachers' working conditions without considering schools' socioeconomic factors, negative associations between the *outcome variables* (empowerment and leadership) and *losing school district* and between the *outcome variables* and the *percentage of choice students* were observed. However, the negative associations disappeared when control variables on school characteristics were also taken into account. Fourth, with respect to *collegial support* and *professional development*, no significant associations between the outcome variables and explanatory variables were observed. However, there were negative associations between *collegial support* and *school size* and between *professional development* and *the amount of local funding*.

Table 5-5: Associations between School Competition and Teachers' Working Conditions

Dependent Variable	Use of Time				Facilities and Resources				Empowerment			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.824***	0.138	0.810***	0.142	0.435***	0.114	0.455***	0.121	0.609***	0.134	0.617***	0.133
Losing Districts	-0.018	0.221	-0.111	0.347	-0.783***	0.157	-0.676**	0.241	-0.979***	0.287	-0.701	0.541
% of Enrollment Change	0.000	0.005	0.004	0.006	0.001	0.004	0.002	0.004	0.010	0.007	0.004	0.009
% of Choice Students	0.006	0.009	-0.005	0.014	-0.019***	0.007	-0.022**	0.009	-0.031**	0.012	-0.022	0.022
Student/Teacher Ratio			0.002	0.039			-0.021	0.027			-0.032	0.059
School Size			0.028	0.029			-0.015	0.019			-0.028	0.046
Local Funding			-0.007	0.011			0.015**	0.007			0.007	0.017
% of FRL			0.011**	0.005			0.006*	0.003			-0.005	0.007
% of Minority			-0.008	0.008			-0.013**	0.006			-0.010	0.013
N	345		345		347		347		344		344	

Dependent Variable	Leadership				Collegial Support				Professional Development			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.677***	0.123	0.692***	0.121	0.098	0.106	0.118	0.104	0.747***	0.135	0.738***	0.135
Losing Districts	-0.896***	0.295	-0.382	0.462	-0.316	0.233	-0.357	0.323	-0.201	0.231	-0.356	0.340
% of Enrollment Change	0.011	0.007	0.002	0.008	0.000	0.005	-0.003	0.006	-0.001	0.005	0.000	0.006
% of Choice Students	-0.032**	0.012	-0.017	0.019	0.000	0.010	-0.006	0.013	-0.003	0.010	-0.013	0.013
Student/Teacher Ratio			-0.053	0.051			-0.034	0.036			-0.049	0.038
School Size			-0.026	0.040			-0.082***	0.027			-0.013	0.028
Local Funding			0.017	0.015			0.005	0.010			-0.020*	0.011
% of FRL			-0.004	0.006			-0.005	0.004			0.001	0.005
% of Minority			-0.022*	0.011			-0.005	0.008			-0.002	0.008
N	343		343		344		344		344		344	

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Discussion

Simple comparison of teachers' working conditions indicated that schools in gaining school districts had better working conditions than schools in losing school districts. However, most differences between gaining and losing school districts (except for *facilities and resources)* disappeared when school characteristics were controlled for. Student enrollment changes from 2004-2005 to 2008-2009 and the percentage of choice students, which are the indicators of the degree of competition among schools, were not significantly associated with teachers' working conditions except for *facilities and resources*. Educators in losing school districts were less likely than those in gaining school districts to agree that their schools had good facilities and resources. In addition, educators at schools with less choice students were less likely to agree that their schools had good facilities and resources. These negative associations seemed to be related to the location of the school districts and schools. Losing school districts and schools with less choice students were usually located in less affluent communities than their competing school districts and schools (Ni & Arsen, 2008). In this respect, it is plausible to speculate that school facilities and resources as part of teachers' working conditions were related to the location of school districts and schools and not simply to competition among schools. As a result, it is difficult to retain the NCE hypothesis that as competition among schools becomes more intensive, schools will make more efforts to improve working conditions. Instead, teachers' working conditions appeared to be associated with teacher characteristics (such as the status of tenure) and school environment (such as local funding, student socioeconomic composition, and school level). In addition, the

likelihood that other latent factors not included in this study might affect teachers' working conditions cannot be excluded.

It is notable that the rejection of the NCE hypothesis does not necessarily imply that educators' responses were not rational. This is because there was not clear evidence that improving teachers' working conditions could contribute to attracting more students in their schools. In addition, as seen in Table 5-3, administrators might think that their schools already have good working conditions for teachers, thus they might not see the need to improve working conditions. As rational actors, educators might have chosen other strategies to attract more students. This issue is beyond the scope of this study. The clearer point here is that we cannot expect that school choice programs will necessarily lead schools to provide better working conditions conducive to student achievement and school improvement.

Regarding the IBE hypothesis, this study has limitations in confirming that administrators and teachers do not know the importance of working conditions or how to improve them. However, a large gap between teachers' and administrators' perceptions regarding teachers' working conditions suggests the possibility that administrators might not have clear knowledge about teachers' working conditions.

The IBE perspective also suggests that even when administrators know about the importance of improving teachers' working conditions and how to improve them, they might not be interested in doing so. When we look at the impact of student enrollment changes on administrators' and teachers' job security, salaries, and benefits, we cannot exclude this possibility. As shown in Chapter 4, more than two-thirds of administrators and teachers responded that changes in student enrollment affected their job security,

salaries, and benefits either *not at all* or only *to some extent*. Student enrollment changes due to school choice programs might fail to motivate administrators to do something to attract more students.

CHAPTER 6

EFFORTS FOR ATTRACTING STUDENTS

This chapter focuses on Research Question 3: *What are schools doing to attract students? Is the degree of organizing activities for attracting more students associated with school competition? Are the activities associated with school problems or parents' school choice reasons?* To answer these questions, 10 possible activities for attracting students were listed on the surveys, and administrators and teachers were asked to rate the extent to which their schools or districts had done each activity. This study also explores whether the degree of organizing these school activities is commensurate with the intensity of school competition measured by the degree of student enrollment changes and the percentage of choice students at the school level. In addition, I explore whether the degree of organizing school activities for attracting students is consistent with the degree of school problems perceived by teachers. Finally, I examine school activities for attracting students address what parents consider when they choose schools for their children.

In regard to this research question, the neoclassical economics (NCE) perspective and the institutional and behavioral economics (IBE) perspective would have different expectations. First, the NCE perspective would expect schools under more severe competition to make greater effort to attract students. Regarding school problems, schools would keenly attend to their problems, if any, because parents, as rational actors, would not choose schools with problems. In terms of the associations between the school activities and the reasons for choosing schools, the NCE perspective would assume that

schools will try to identify what factors parents consider important when they choose schools for their children. As a result, the NCE perspective would draw a conclusion that school choice policies can contribute to addressing school problems and what parents want.

However, the IBE perspective would question the central logic of the NCE perspective. With regard to the associations between school problems and school activities for attracting students, the IBE perspective does not assume that administrators will know about their school problems. In addition, even though administrators perceive the school problems, it cannot be assumed that they will know about appropriate strategies to solve the problems. Finally, we cannot know whether or not administrators try to address the problems even when they know the problems and ways to address them. Similarly, in terms of the associations between school activities for attracting students and parents' reasons for choosing schools, the IBE perspective would not assume that administrators know about the reasons for choosing schools and that they know ways to address what parents consider when they choose schools. Lastly, the IBE perspective would not assume that administrators will try to address parents' needs even when they are aware of parents' needs and the ways to address them.

Based on the two competing perspectives, this study generates the following two hypotheses.

Hypothesis 3a (NCE): The schools would examine who choice students/families are and what types of schooling options they are seeking. As competition among schools becomes severe, schools would make more efforts to attract students. In addition, as a given school problem becomes more serious, schools would make more efforts to address

that problem. Finally, schools' strategies for attracting students would be closely associated with the reasons for parents' school choice decisions.

Hypothesis 3b (IBE): There might be no difference between schools when schools fail to analyze problems, do not have enough capacity to come up with appropriate strategies, or just adopt other schools' strategies. Schools might rely only on their perceptions of the reasons for parents' school choice decisions without doing systematic research about parents' actual decisions.

Activities for Attracting Students

Teachers

The degree of organizing various activities for attracting students under school choice programs was measured by educators' perceptions. Administrators and teachers were asked to indicate the degree to which their schools were engaged in each of 10 possible school activities for attracting students. They could indicate one of the following choices: *1=not at all, 2=to some extent, 3=to a moderate extent, 4=to a great extent,* and *5=not sure*. Responses with *not sure* were excluded from the analyses.

The finding on teachers' perceptions of schools' and districts' activities to increase student enrollment revealed that their schools and districts did not make much effort in order to increase student enrollment (see Table 6-1). Of 10 possible activities for attracting students, teachers responded that their schools had done each activity to "some extent" or to "a moderate extent." Among the 10 possible activities, teachers responded that schools and districts had made more efforts to improve student achievement, improve school curriculum, maintain a safe environment, invest in school facilities and resources, and improve relationships with parents than the others. There were some

differences between gaining and losing school districts with regard to the extent to which they were engaged in these activities. It is notable that among the 10 possible activities, both gaining and losing school districts made less effort to research who choice students/families were or to counsel out low-performing teachers. Another noticeable point is that gaining school districts made more efforts than losing school districts except with regard to improving school curriculum and advertising their schools.

Table 6-1: Teachers' Perceptions of Schools' Activities for Increasing Student Enrollment

Activities	Both	Gaining	Losing	Diff.
Improve student achievement	2.92	3.03	2.83	.20
Improve school curriculum	2.81	2.72	2.88	-.16
Maintain a safe environment (school order and discipline)	2.78	2.98	2.62	.36
Invest in school facilities and resources	2.69	2.76	2.63	.13
Improve relationships with parents	2.59	2.68	2.52	.16
Advertise school	2.44	2.23	2.60	-.37
Improve extra-curricular activities	2.27	2.33	2.22	.11
Recruit more highly qualified teachers	2.26	2.41	2.13	.28
Research who choice students/families are and what types of schooling options they are seeking	2.07	1.99	2.12	-.13
Counsel out low-performing teachers	1.49	1.48	1.50	-.01
Means	2.43	2.46	2.41	.06

Note. 1=not at all, 2=some extent, 3=moderate extent, and 4=great extent. Clustering of educators within schools was ignored.

Administrators

Administrators' responses showed that they made more efforts to maintain a safe environment, improve student achievement, improve school curriculum, and invest in school facilities and resources than the other activities (see Table 6-2). It is noticeable that schools and districts made less effort to counsel out low-performing teachers or to research who choice students/families were than the other activities.

Teachers vs. Administrators

Compared with teachers, administrators seemed to think that schools and districts had made more efforts to attract students than teachers did (see Table 6-3). Except for

researching who choice students/families were, administrators rated the degree of organizing school activities for attracting more students more highly than teachers did.

Table 6-2: Administrators' Perceptions of Schools' Activities for Increasing Student Enrollment

	Both	Gaining	Losing	Diff.
Maintain a safe environment (school order and discipline)	3.40	3.40	3.40	.00
Improve student achievement	3.37	3.13	3.60	-.47
Improve school curriculum	3.30	3.27	3.33	-.07
Invest in school facilities and resources	3.03	3.07	3.00	.07
Improve relationships with parents	2.77	2.87	2.67	.20
Recruit more highly qualified teachers	2.62	2.80	2.43	.37
Improve extra-curricular activities	2.60	2.40	2.80	-.40
Advertise school	2.58	2.38	2.80	-.43
Counsel out low-performing teachers	2.00	2.43	1.57	.86
Research who choice students/families are and what types of schooling options they are seeking	1.85	1.38	2.29	-.90
Means	2.75	2.71	2.79	-.08

Note. 1=not at all, 2=some extent, 3=moderate extent, and 4=great extent. Clustering of educators within schools was ignored.

Table 6-3: Differences in Perceptions of Schools' Activities for Increasing Student Enrollment Between Teachers and Administrators

	Teacher	Adm.	Diff.
Advertise school	2.44	2.58	-0.14
Invest in school facilities and resources	2.69	3.03	-0.34
Recruit more highly qualified teachers	2.26	2.62	-0.36
Improve school curriculum	2.81	3.30	-0.49
Counsel out low-performing teachers	1.49	2.00	-0.51
Improve relationships with parents	2.59	2.77	-0.18
Maintain a safe environment (school order and discipline)	2.78	3.40	-0.62
Improve student achievement	2.92	3.37	-0.44
Improve extra-curricular activities	2.27	2.60	-0.33
Research who choice students/families are and what types of schooling options they are seeking	2.07	1.85	0.21
Means	2.43	2.75	-0.32

Note. 1=not at all, 2=some extent, 3=moderate extent, and 4=great extent. Clustering of educators within schools was ignored.

As Table 6-4 shows, for gaining school districts, there were relatively larger differences between teachers and administrators with regard to the following items than the others: counsel out low-performing teachers, research who choice students/families are, and improve school curriculum. With respect to losing school districts, there were larger differences between teachers and administrators with regard to the following items

than the others: maintain a safe environment, improve student achievement, and improve extra-curricular activities.

Table 6-4: Differences in Perceptions of Schools' Activities for Increasing Student Enrollment Between Teacher and Administrators in Gaining and Losing School Districts

	Gaining			Losing		
	Teacher	Adm.	Diff.	Teacher	Adm.	Diff.
Advertise school	2.23	2.38	-0.14	2.60	2.80	-0.20
Invest in school facilities and resources	2.76	3.07	-0.30	2.63	3.00	-0.37
Recruit more highly qualified teachers	2.41	2.80	-0.39	2.13	2.43	-0.29
Improve school curriculum	2.72	3.27	-0.55	2.88	3.33	-0.45
Counsel out low-performing teachers	1.48	2.43	-0.94	1.50	1.57	-0.08
Improve relationships with parents	2.68	2.87	-0.19	2.52	2.67	-0.15
Maintain a safe environment (school order and discipline)	2.98	3.40	-0.42	2.62	3.40	-0.78
Improve student achievement	3.03	3.13	-0.10	2.83	3.60	-0.77
Improve extra-curricular activities	2.33	2.40	-0.07	2.22	2.80	-0.58
Research who choice students/families are and what types of schooling options they are seeking	1.99	1.38	0.60	2.12	2.29	-0.17
Means	2.46	2.71	-0.25	2.41	2.79	-0.38

Note. 1=not at all, 2=some extent, 3=moderate extent, and 4=great extent. Clustering of educators within schools was ignored.

Differences between Subgroups

To examine whether educators' perceptions of school activities for attracting students were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical non-linear models. Outcome variables were the 10 possible school activities for attracting students listed in Table 6-5. The outcome variables were ordinal. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school. Position, tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

$$\text{Prob}[R = 1|B] = P'(1) = P(1)$$
$$\text{Prob}[R <= 2|B] = P'(2) = P(1) + P(2)$$
$$\text{Prob}[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)$$

Prob[R <= 4|B] = 1.0

where
P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) +
B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) +
B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) +
B3*(NONTENUR) + d(3)

Level-2 Model

B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As shown in Table 6-5, no significant differences between gaining and losing school districts were observed with regard to the degree of organizing school activities for attracting students except for *maintaining safe environment*. Losing school districts were less likely than gaining school districts to make an effort to maintain a safe environment. Second, middle schools were less likely than elementary schools to make an effort to maintain a safe environment. There were no significant differences between elementary and middle schools with regard to the other activities. High schools were less likely than elementary schools to make an effort to maintain a safe environment, improve student achievement, or do research about choice students and families. No significant differences between elementary and high schools were found with regard to the other activities.

Third, administrators were more likely than teachers to think that schools made effort to recruit more highly qualified teachers, improve school curriculum, counsel out

low-performing teachers, maintain a safe environment, and improve student environment. Administrators and teachers did not differ in the other activities. Fourth, male educators were less likely than female educators to think that schools made effort to improve the school curriculum. There were no significant differences between female and male educators with regard to their perceptions of the other activities. Finally, non-tenured educators were more likely than tenured educators to think that schools made effort to maintain a safe environment and improve extra-curricular activities. Tenured and non-tenured educators did not differ in their perceptions of the other activities.

Table 6-5: Differences between Subgroups in the Perceptions of Schools' Activities for Attracting Students

	Advertise school		Invest in school facilities and resources		Recruit more highly qualified teachers		Improve school curriculum		Counsel out low-performing teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	0.763	0.620	-0.073	0.394	-0.483	0.341	0.108	0.297	-0.080	0.440
Middle School	0.064	0.705	0.117	0.443	-0.044	0.401	-0.014	0.348	0.038	0.514
High School	-0.145	0.788	-0.173	0.503	-0.656	0.431	-0.547	0.376	0.034	0.551
Administrator	0.223	0.444	0.581	0.408	0.823**	0.391	1.014**	0.408	1.454***	0.448
Male	-0.286	0.328	0.141	0.321	-0.182	0.293	-0.463*	0.272	0.262	0.331
Non-tenured	0.030	0.419	0.279	0.373	1.086	0.397	0.343	0.330	-0.061	0.464

	Improve relationships with parents		Maintain a safe environment		Improve student achievement		Improve extra-curricular activities		Research who choice students/families are	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	-0.280	0.386	-1.144**	0.408	-0.622	0.390	-0.154	0.494	0.364	0.428
Middle School	-0.186	0.443	-0.879*	0.485	-0.675	0.465	-0.527	0.576	-0.549	0.494
High School	-0.623	0.494	-1.033*	0.519	-1.435***	0.492	-0.901	0.627	-1.150**	0.541
Administrator	0.232	0.382	1.368***	0.420	0.919**	0.411	0.654	0.393	-0.407	0.494
Male	0.119	0.277	-0.163	0.295	0.023	0.294	0.055	0.295	0.162	0.349
Non-tenured	0.549	0.336	0.753**	0.353	0.275	0.357	1.079**	0.417	0.224	0.477

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between School Competition and School Activities for Attracting Students.

In order to examine whether the degree of organizing school activities for attracting students is associated with the degree of competition among schools, two-level non-linear regressions were employed. The degree of competition was measured by *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* In this study, it was assumed that educators in losing school districts and at schools with decreasing student enrollment and smaller percentages of choice students would feel competition to a greater extent than their counterparts.

There were two models for each outcome variable. Model 1 for each outcome variable examined the relationship between the outcome variable and the explanatory variables with only one control variable included in the model. The explanatory variables were *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* As a common control variable for both Model 1 and Model 2, the position variable (administrator or teacher) at the individual level was included. For Model 2, the following control variables at the school level were added in Model 2 for each outcome variable: *student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch,* and *the percentage of minority students.*

Level-1 Model

$$\text{Prob}[R = 1|B] = P'(1) = P(1)$$
$$\text{Prob}[R <= 2|B] = P'(2) = P(1) + P(2)$$
$$\text{Prob}[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)$$
$$\text{Prob}[R <= 4|B] = 1.0$$

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + d(3)

Level-2 Model

Model 1
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + U0
B1 = G10 + U1

Model 2
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + G04*(TSRATIO) + G05*(SCHSIZE) + G06*(LOFUND) + G07*(FRL) + G08*(MINORITY) + U0
B1 = G10 + U1

As shown in Table 6-6, according to educators' perceptions, losing school districts were more likely than gaining school districts to make an effort to advertise and do research who choice students/families were. However, the differences disappeared when controlling for school socioeconomic environment such as student/teacher ratio, school size, local funding, and the percentages of students eligible for free and reduced lunch and minority students (see Table 6-7). In addition, losing school districts were less likely than gaining school districts to make an effort to maintain a safe environment. There were no statistically significant differences between gaining and losing school districts with regard to the other school activities for attracting students. Second, the degree of organizing activities was not statistically associated with the degree of student enrollment changes during the past five years except for counseling out low-performing teachers. Schools with decreasing student enrollment were less likely than schools with increasing student enrollment to make an effort to counsel out low-performing teachers.

Finally, schools with higher percentages of choice students were more likely than schools with smaller percentages to make an effort to advertise schools and counsel out low-performing teachers. However, the differences disappeared when controlling for school-level socioeconomic factors such as student/teacher ratio, school size, local funding, and percentages of students eligible for free and reduced lunch and minority students (see Table 6-7). In addition, schools with higher percentages of choice students were less likely than schools with smaller percentages of choice students to make an effort to maintain a safe environment.

Table 6-6: Associations between School Competition and Schools' Activities for Attracting Students

	Advertise school		Invest in school facilities and resources		Recruit more highly qualified teachers		Improve school curriculum		Counsel out low-performing teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.178	0.414	0.461	0.402	0.501	0.376	0.785*	0.407	1.564***	0.411
Losing Districts	1.992**	0.874	-0.147	0.606	-0.464	0.522	-0.051	0.433	0.050	0.578
% of Enrollment Changes	-0.003	0.020	-0.003	0.014	-0.002	0.012	0.004	0.010	-0.026*	0.014
% of Choice Students	0.066*	0.036	-0.003	0.026	0.005	0.022	-0.020	0.018	0.043*	0.023

	Improve relationships with parents		Maintain a safe environment		Improve student achievement		Improve extra-curricular activities		Research who choice students/families are	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.108	0.365	1.050**	0.400	0.908**	0.402	0.432	0.368	-0.354	0.409
Losing Districts	-0.468	0.513	-1.224**	0.588	-0.762	0.648	-0.061	0.676	1.067*	0.566
% of Enrollment Changes	0.017	0.012	0.021	0.013	0.012	0.015	0.010	0.015	0.019	0.013
% of Choice Students	-0.029	0.021	-0.057**	0.024	-0.038	0.026	-0.007	0.028	0.007	0.023

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Table 6-7: Associations between School Competition and School Activities for Attracting Students after Controlling for School Characteristics

	Advertise school		Invest in school facilities and resources		Recruit more highly qualified teachers		Improve school curriculum		Counsel out low-performing teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.033	0.451	0.486	0.448	0.555	0.372	0.739*	0.398	1.615***	0.416
Losing Districts	0.228	1.507	1.497*	0.787	-1.256	0.903	-0.135	0.813	-0.184	1.171
% of Enrollment Change	0.028	0.026	-0.009	0.012	0.010	0.015	0.001	0.013	-0.041*	0.021
% of Choice Students	-0.020	0.060	0.031	0.030	-0.045	0.035	-0.034	0.031	0.029	0.046
Student/Teacher Ratio	0.223	0.165	-0.048	0.085	0.054	0.101	0.002	0.092	0.158	0.133
School Size	-0.075	0.129	0.133**	0.060	-0.080	0.075	-0.074	0.065	-0.089	0.096
Local Funding	-0.083	0.049	0.071***	0.023	-0.018	0.028	-0.020	0.025	-0.007	0.036
% of FRL	0.029	0.021	0.036***	0.010	0.021	0.012	-0.003	0.011	-0.002	0.015
% of Minority	0.032	0.037	-0.092***	0.020	-0.008	0.022	-0.007	0.020	-0.006	0.028

	Improve relationships with parents		Maintain a safe environment		Improve student achievement		Improve extra-curricular activities		Research who choice students/families are	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.048	0.384	1.054**	0.424	0.860**	0.392	0.455	0.377	-0.332	0.415
Losing Districts	-0.280	0.900	-1.999**	0.960	-1.685	1.124	-1.431	1.014	0.317	1.070
% of Enrollment Change	0.001	0.015	0.028*	0.016	0.019	0.019	0.023	0.017	0.017	0.018
% of Choice Students	-0.030	0.036	-0.099**	0.038	-0.089*	0.044	-0.086**	0.040	-0.025	0.042
Student/Teacher Ratio	0.123	0.101	-0.048	0.108	-0.005	0.124	0.175	0.112	0.124	0.119
School Size	-0.107	0.074	-0.112	0.077	-0.179*	0.095	-0.171*	0.085	-0.144	0.090
Local Funding	-0.009	0.028	-0.049	0.029	-0.036	0.036	-0.050	0.032	-0.041	0.034
% of FRL	-0.009	0.012	0.005	0.012	0.003	0.015	0.019	0.014	-0.010	0.014
% of Minority	-0.015	0.022	-0.000	0.023	0.005	0.027	0.005	0.024	0.020	0.026

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

School Problems

School problems were measured by educators' perceptions. Administrators and teachers were asked to indicate the degree to which each of the listed school problems was a problem in their schools. They could indicate one of the following choices: 1=not a problem, 2=minor problem, 3=moderate problem, and 4=serious problem.

Teachers

In the views of teachers, the following problems seemed more serious than the others: student tardiness, student absenteeism, student apathy (lack of engagement), poverty, lack of parental involvement, student unpreparedness, and decrease in student enrollment (see Table 6-8). However, teachers considered the following as "not a problem" or "a minor problem": student class cutting, student dropping out, quality of instruction, school curriculum, teacher absenteeism, and increase in student enrollment. It is noticeable that teachers in losing school districts were more likely than those in gaining school districts to consider each problem serious.

Table 6-8: Teachers' Perceptions of School Problems

	Both	Gaining	Losing	Diff.
Student tardiness	2.56	2.27	2.81	-0.54
Student absenteeism	2.57	2.20	2.88	-0.68
Students class cutting	1.70	1.46	1.92	-0.46
Students dropping out	1.67	1.39	1.92	-0.53
Student apathy (lack of engagement)	2.63	2.32	2.90	-0.58
Lack of parental involvement	2.48	1.93	2.95	-1.02
Poverty	2.74	2.26	3.15	-0.89
Students come to school unprepared	2.76	2.35	3.12	-0.77
Quality of instruction is poor	1.88	1.61	2.11	-0.50
Lack of school resources	1.86	1.47	2.20	-0.73
Poor teaching quality	1.32	1.16	1.45	-0.29
Inappropriate school curriculum	1.36	1.24	1.46	-0.22
School order and discipline policies	1.92	1.51	2.28	-0.77
Teacher absenteeism	1.35	1.18	1.51	-0.33
Decrease in student enrollment	2.54	2.12	2.90	-0.78
Increase in student enrollment	1.14	1.08	1.19	-0.11
Meeting Adequate Yearly Progress (AYP)	1.84	1.27	2.35	-1.08

Note. 1=not a problem, 2=minor problem, 3=moderate problem, and 4=serious problem. Clustering of educators within schools was ignored.

Administrators

Administrators in both gaining and losing school districts considered the following problems more serious than the others: poverty, student unpreparedness, student apathy (lack of engagement), decrease in student enrollment, student tardiness, and student absenteeism (see Table 6-9). In contrast, administrators viewed the following problems as "not a problem" or as "minor problems": school curriculum, increase in student enrollment, school order and discipline, and student dropping out. In addition, overall, administrators in losing school districts considered each problem more serious than those in gaining school districts.

Table 6-9: Administrators' Perceptions of School Problems

	Both	Gaining	Losing	Diff.
Student tardiness	2.19	2.00	2.40	-0.40
Student absenteeism	2.19	1.88	2.53	-0.65
Students class cutting	1.41	1.41	1.40	0.01
Students dropping out	1.28	1.29	1.27	0.02
Student apathy (lack of engagement)	2.28	2.18	2.40	-0.22
				0.00
Lack of parental involvement	2.19	1.88	2.53	-0.65
Poverty	2.66	2.24	3.13	-0.89
Students come to school unprepared	2.47	2.06	2.93	-0.87
				0.00
Quality of instruction is poor	1.75	1.47	2.07	-0.60
Lack of school resources	1.53	1.53	1.53	0.00
Poor teaching quality	1.38	1.12	1.67	-0.55
Inappropriate school curriculum	1.19	1.00	1.40	-0.40
School order and discipline policies	1.22	1.06	1.40	-0.34
Teacher absenteeism	1.69	1.35	2.07	-0.72
				0.00
Decrease in student enrollment	2.22	2.06	2.40	-0.34
Increase in student enrollment	1.03	1.06	1.00	0.06
Meeting Adequate Yearly Progress (AYP)	1.72	1.47	2.00	-0.53

Note. 1=not a problem, 2=minor problem, 3=moderate problem, and 4=serious problem. Clustering of educators within schools was ignored.

Administrators vs. Teachers

Teachers were more likely than administrators to consider most school-related problems serious except poor teaching quality and teacher absenteeism. Noticeably, both teachers and administrators did not appear to view teaching quality and the school curriculum as serious problems. The largest difference was observed in perceptions of school order and discipline policies between teachers and administrators. Teachers tended to consider the problem of school order and discipline policies more serious than administrators (see Table 6-10).

Table 6-10: Differences in Perceptions of School Problems between Teachers and Administrators

	Teach.	Admi.	Diff.
Student tardiness	2.56	2.19	.37
Student absenteeism	2.57	2.19	.38
Students class cutting	1.70	1.41	.30
Students dropping out	1.67	1.28	.39
Student apathy (lack of engagement)	2.63	2.28	.35
Lack of parental involvement	2.48	2.19	.29
Poverty	2.74	2.66	.08
Students come to school unprepared	2.76	2.47	.29
Quality of instruction is poor	1.88	1.75	.13
Lack of school resources	1.86	1.53	.33
Poor teaching quality	1.32	1.38	-.06
Inappropriate school curriculum	1.36	1.19	.17
School order and discipline policies	1.92	1.22	.70
Teacher absenteeism	1.35	1.69	-.33
Decrease in student enrollment	2.54	2.22	.32
Increase in student enrollment	1.14	1.03	.11
Meeting Adequate Yearly Progress (AYP)	1.84	1.72	.13

Note. 1=not a problem, 2=minor problem, 3=moderate problem, and 4=serious problem. Clustering of educators within schools was ignored.

As indicated in Table 6-11, the magnitude of the difference in most items between teachers and administrators was larger in losing school districts than in gaining school districts. While the differences in gaining school districts were less than .45 for all school problems, the differences in losing school districts were more than .50 with regard to the following problems: student class cutting, student dropping out, student apathy (lack of engagement), lack of school resources, school order and discipline policies, teacher absenteeism, and decrease in student enrollment.

Table 6-11: Differences in Perceptions of School Problems between Teachers and Administrators in Gaining and Losing School Districts

	Gaining School Districts			Losing School Districts		
	Teach.	Admi.	Diff.	Teach.	Admi.	Diff.
Student tardiness	2.27	2.00	.27	2.81	2.40	.41
Student absenteeism	2.20	1.88	.32	2.88	2.53	.35
Students class cutting	1.46	1.41	.04	1.92	1.40	.52
Students dropping out	1.39	1.29	.09	1.92	1.27	.66
Student apathy (lack of engagement)	2.32	2.18	.14	2.90	2.40	.50
Lack of parental involvement	1.93	1.88	.05	2.95	2.53	.42
Poverty	2.26	2.24	.02	3.15	3.13	.01
Students come to school unprepared	2.35	2.06	.29	3.12	2.93	.19
Quality of instruction is poor	1.61	1.47	.14	2.11	2.07	.05
Lack of school resources	1.47	1.53	-.06	2.20	1.53	.66
Poor teaching quality	1.16	1.12	.04	1.45	1.67	-.21
Inappropriate school curriculum	1.24	1.00	.24	1.46	1.40	.06
School order and discipline policies	1.51	1.06	.45	2.28	1.40	.88
Teacher absenteeism	1.18	1.35	-.18	1.51	2.07	-.56
Decrease in student enrollment	2.12	2.06	.06	2.90	2.40	.50
Increase in student enrollment	1.08	1.06	.03	1.19	1.00	.19
Meeting Adequate Yearly Progress (AYP)	1.27	1.47	-.20	2.35	2.00	.35

Note. 1=not a problem, 2=minor problem, 3=moderate problem, and 4=serious problem. Clustering of educators within schools was ignored.

Differences between Subgroups

To examine whether educators' perceptions of school problems were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical non-linear models. Seventeen outcome variables can be seen in Table 6-12. The outcome variables were ordinal. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts,*

middle school, and *high school. Position, tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where
P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(3)

Level-2 Model
B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As shown in Table 6-12, it is first notable that educators in losing school districts were more likely than those in gaining school districts to view all the school problems seriously. Second, middle school educators tended to view the following problems more seriously than elementary school educators: *student class cutting, students dropping out, student apathy, students come to school unprepared, lack of school resources, poor teaching quality, school order and discipline policies, school order and discipline policies, teacher absenteeism,* and *decrease in student enrollment.* There were no significant differences between elementary and middle school educators with regard to the other problems. High school educators tended to view all the school problems more

seriously than elementary school educators except with regard to the following three problems: *poverty, quality of instruction is poor,* and *decrease in student enrollment.* There were no statistically significant differences between elementary and high school educators with regard to those problems.

Third, administrators were less likely than teachers to view the following school problems seriously: *student absenteeism, student apathy, students come to school unprepared,* and *school order and discipline policies.* In contrast, they were more likely than teachers to view *teacher absenteeism* seriously. There were no significant differences between administrators and teachers with regard to the other school problems. Fourth, male educators tended to view the following problems more seriously than female educators: *student apathy, inappropriate school curriculum,* and *meeting adequate yearly progress.* No significant differences between female and male educators were observed with regard to the other school problems. Finally, non-tenured educators tended to view *lack of parental involvement* and *poor teaching quality* less seriously than tenured educators. There were no significant differences between tenured and non-tenured educators with regard to the other school problems.

Table 6-12: Difference between Subgroups regarding Educators' Perceptions of School Problems

	Student Tardiness		Student absenteeism		Students class cutting		Students dropping out		Student apathy	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	1.618**	0.583	2.006***	0.476	3.814***	0.864	4.186***	0.935	1.651***	0.491
Middle School	0.140	0.666	0.823	0.543	4.078***	0.953	3.867***	1.016	2.223***	0.571
High School	2.236***	0.739	3.355***	0.591	7.601***	1.067	8.147***	1.153	2.926***	0.621
Administrator	-0.597	0.429	-0.778*	0.399	-0.189	0.536	-0.809	0.612	-0.811*	0.418
Male	0.271	0.293	0.284	0.282	-0.271	0.338	-0.682	0.404	0.522*	0.280
Non-tenured	-0.133	0.317	-0.030	0.337	0.152	0.409	0.116	0.407	0.258	0.321

	Lack of parental involvement		Poverty		Students come to school unprepared		Quality of instruction is poor		Lack of school resources		Poor teaching quality	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	2.129***	0.675	2.409***	0.625	2.483***	0.545	1.256***	0.354	1.798***	0.409	1.659***	0.471
Middle School	0.893	0.771	-0.102	0.715	1.388**	0.622	0.064	0.397	0.800*	0.457	0.904*	0.507
High School	1.753**	0.842	-0.022	0.756	1.399**	0.668	0.092	0.442	1.276**	0.508	2.063***	0.549
Administrator	-0.694	0.451	0.516	0.444	-0.786*	0.438	-0.117	0.421	-0.659	0.489	0.001	0.566
Male	0.276	0.301	-0.426	0.407	-0.121	0.299	-0.113	0.284	-0.179	0.302	0.406	0.412
Non-tenured	-0.819**	0.322	-0.112	0.382	-0.193	0.357	0.004	0.367	0.037	0.450	-1.185**	0.505

	Inappropriate school curriculum		School order and discipline policies		Teacher absenteeism		Decrease in student enrollment		Meeting Adequate Yearly Progress	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	1.138**	0.439	2.317***	0.605	1.776***	0.620	2.202***	0.518	4.126***	0.764
Middle School	0.156	0.521	1.691**	0.692	1.393*	0.691	1.527**	0.591	1.297	0.827
High School	1.028*	0.522	2.405***	0.741	1.684**	0.743	0.647	0.646	2.377**	0.910
Administrator	-0.881	0.567	-1.954***	0.572	1.665***	0.505	-0.790	0.514	0.326	0.525
Male	0.675*	0.361	-0.113	0.306	0.312	0.368	0.158	0.327	0.745*	0.434
Non-tenured	0.380	0.412	-0.225	0.376	-0.009	0.485	-0.337	0.397	-0.003	0.478

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Educators' Perceptions of the Reasons for Parents' School Choice Decisions

In order to measure the importance of various reasons for choosing schools, administrators and teachers were asked to indicate the extent to which parents in their school districts consider each of 12 possible reasons when they choose schools for their children. Administrators and teachers could indicate one of the following choices: *1=not at all, 2=to some extent, 3=to a moderate extent, 4=to a great extent,* and *5=not sure.* Responses with *not sure* were excluded from the analyses.

Teachers

Among 12 possible reasons for parents' choices regarding schools for their children, teachers responded that parents would place the most importance on the following three reasons: *school reputation and history, safe environment (school order and discipline),* and *academic programs* (see Table 6-13). Teachers in gaining school districts were more likely than those in losing school districts to consider all possible parental reasons except the following two as important: location or convenience and student racial composition. Teachers in losing school districts were more likely than those in gaining school districts to perceive that parents consider those reasons as important factors.

Table 6-13: Teachers' Perspectives on Parents' School Choice Reasons

	Both	Gaining	Losing	Diff.
School reputation and history	3.62	3.87	3.40	.47
Safe environment (school order and discipline)	3.57	3.66	3.48	.18
Academic programs	3.38	3.63	3.15	.48
Teacher quality	3.36	3.61	3.13	.49
School facilities	3.35	3.51	3.20	.30
Academic performance/test scores	3.28	3.54	3.05	.48
School resources	3.25	3.47	3.05	.42
Extra-curricular activities	3.20	3.33	3.09	.24
Location or convenience	3.03	2.87	3.17	-.31
Teaching practices	2.93	3.09	2.78	.31
Socio-economic status of the community	2.81	2.96	2.68	.28
Student racial composition	2.37	2.04	2.64	-.60
Mean	3.18	3.30	3.07	.23

Note. 1=Not at all, 2=Some extent, 3=Moderate extent, and 4=Great extent. Clustering of educators within schools was ignored.

Administrators

As Table 6-14 shows, among 12 possible reasons for parents' choices regarding schools for their children, administrators responded that parents would consider the following reasons more seriously than the others: safe environment (school order and discipline), school reputation and history, academic programs, and academic performance/test scores. Generally speaking, administrators' responses were similar to teachers'. Administrators in gaining school districts were more likely than those in losing school districts to consider all the reasons except the following two as more important: location or convenience and student racial composition. Administrators in losing school districts shared the same pattern of responses as their teachers regarding their perceptions of school location or convenience and student racial composition. It means that administrators in losing school districts were more likely than those in gaining school districts to perceive that parents consider school location and student racial composition as more important factors.

Table 6-14: Administrators' Perspectives on Parents' School Choice Reasons

	Both	Gaining	Losing	Diff.
Safe environment (school order and discipline)	3.75	3.88	3.60	.28
School reputation and history	3.72	4.00	3.40	.60
Academic programs	3.50	3.76	3.20	.56
Academic performance/test scores	3.34	3.65	3.00	.65
Teacher quality	3.31	3.82	2.73	1.09
Extra-curricular activities	3.29	3.56	3.00	.56
School facilities	3.22	3.35	3.07	.29
School resources	3.00	3.56	2.36	1.21
Socio-economic status of the community	2.93	3.13	2.73	.40
Location or convenience	2.87	2.56	3.20	-.64
Teaching practices	2.87	3.18	2.50	.68
Student racial composition	2.20	1.88	2.57	-.70
Mean	3.17	3.36	2.95	.42

Note. 1=Not at all, 2=Some extent, 3=Moderate extent, and 4=Great extent. Clustering of educators within schools was ignored.

Teachers vs. Administrators

As shown in Table 6-15, teachers were more likely than administrators to consider the following as more important factors for parents: location or convenience, school facilities, teacher quality, school resources, student racial composition, and teaching practice.

Table 6-15: Differences between Teachers' and Administrators' Perspectives on Parents' School Choice Reasons

	Teach.	Admi.	Diff.
Location or convenience	3.03	2.87	.16
Safe environment (school order and discipline)	3.57	3.75	-.18
Socio-economic status of the community	2.81	2.93	-.12
School facilities	3.35	3.22	.13
Academic performance/test scores	3.28	3.34	-.06
Academic programs	3.38	3.50	-.12
Extra-curricular activities	3.20	3.29	-.09
Teacher quality	3.36	3.31	.05
School resources	3.25	3.00	.25
School reputation and history	3.62	3.72	-.10
Student racial composition	2.37	2.20	.17
Teaching practices	2.93	2.87	.06

Note. 1=Not at all, 2=Some extent, 3=Moderate extent, and 4=Great extent. Clustering of educators within schools was ignored.

As indicated in Table 6-16, in gaining school districts, teachers were more likely than administrators to consider the following as more important factors for parents: location, school facilities, and student racial composition. However, in losing school districts, teachers were more likely than administrators to consider the following as more important factors for parents: school facilities, teacher quality, school resources, and teaching practices.

Table 6-16: Differences between Teachers' and Administrators' Perspectives on Parents' School Choice Reasons in Gaining and Losing School Districts

	Gaining School Districts			Losing School Districts		
	Teach.	Admi.	Diff.	Teach.	Admi.	Diff.
Location or convenience	2.87	2.56	.31	3.17	3.20	-.03
Safe environment (school order and discipline)	3.66	3.88	-.22	3.48	3.60	-.12
Socio-economic status of the community	2.96	3.13	-.17	2.68	2.73	-.05
School facilities	3.51	3.35	.15	3.20	3.07	.14
Academic performance/test scores	3.54	3.65	-.11	3.05	3.00	.05
Academic programs	3.63	3.76	-.14	3.15	3.20	-.05
Extra-curricular activities	3.33	3.56	-.24	3.09	3.00	.09
Teacher quality	3.61	3.82	-.21	3.13	2.73	.39
School resources	3.47	3.56	-.09	3.05	2.36	.70
School reputation and history	3.87	4.00	-.13	3.40	3.40	.00
Student racial composition	2.04	1.88	.17	2.64	2.57	.07
Teaching practices	3.09	3.18	-.09	2.78	2.50	.28

Note. 1=Not at all, 2=Some extent, 3=Moderate extent, and 4=Great extent. Clustering of educators within schools was ignored.

Differences between Subgroups

To examine whether educators' perceptions of school choice reasons were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical non-linear models. Outcome variables were educators' perceptions of the importance of 12 possible school choice reasons for parents. The outcome variables were ordinal. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle*

school, and *high school. Position*, *tenure* and *gender* at the individual level were included.

The models are as follows.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where
P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(3)

Level-2 Model

B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As shown in Table 6-17, it is first notable that educators in losing school districts were less likely than those in gaining schools to think that parents considered each school choice reason seriously except with regard to *location or convenience, socioeconomic status of the community, extra-curricular activities,* and *student racial composition.* There were no statistically significant differences between gaining and losing school districts regarding *socioeconomic status of the community* and *extra-curricular activities.* However, educators in losing school districts were more likely than those in gaining

school districts to think that parents considered *location or convenience* and *student racial composition*.

Second, educators in middle schools were more likely than those in elementary schools to think that parents considered *extra-curricular activities* and *school resources* seriously. No statistically significant differences were found with regard to the other choice reasons. Educators in high schools were more likely than those in elementary schools to think that parents considered *school facilities, extra-curricular activities,* and *school resources* seriously. However, they were less likely than educators in elementary schools to think that parents considered *teaching practice* seriously. Educators in elementary and high schools did not differ with regard to the other choice reasons. Third, no statistically significant differences between teachers and administrators were observed. Fourth, male educators were less likely than female educators to think that parents considered *academic performance/test scores, school resources,* and *teaching practices* seriously. Male and female educators did not differ with regard to the other school choice reasons. Finally, non-tenured educators were more likely than tenured educators to think that parents considered *teacher quality* and *teaching practices* seriously. Tenured and non-tenured educators did not statistically differ with regard to the other choice reasons.

Table 6-17: Differences between Subgroups in Educators' Perceptions of School Choice Reasons

	Location or convenience		Safe environment		Socio-economic status of the community		School facilities		Academic performance/test scores	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	0.922***	0.248	-0.631*	0.316	-0.659	0.406	-0.650*	0.336	-1.558***	0.420
Middle School	-0.137	0.285	0.488	0.368	0.304	0.468	0.597	0.389	0.158	0.497
High School	0.278	0.312	0.034	0.389	-0.134	0.513	0.743*	0.428	-0.501	0.518
Administrator	-0.147	0.394	0.811	0.546	0.203	0.446	-0.373	0.427	0.177	0.442
Male	-0.083	0.265	-0.070	0.316	0.200	0.283	-0.469	0.314	-0.668*	0.335
Non-tenured	0.094	0.312	-0.134	0.369	-0.355	0.391	-0.095	0.372	0.173	0.417

	Academic programs		Extra-curricular activities		Teacher quality		School resources		School reputation and history	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	-1.499***	0.436	-0.397	0.348	-1.524***	0.337	-1.250***	0.272	-2.211***	0.470
Middle School	0.276	0.507	1.242***	0.403	-0.071	0.393	0.554*	0.306	-0.031	0.489
High School	-0.217	0.537	1.252**	0.447	-1.028**	0.404	0.627*	0.342	-0.256	0.552
Administrator	0.232	0.476	0.194	0.490	0.144	0.494	-0.534	0.463	0.266	0.532
Male	-0.502	0.315	-0.260	0.368	-0.419	0.335	-0.687**	0.327	0.100	0.433
Non-tenured	-0.208	0.375	0.346	0.394	0.803*	0.426	0.510	0.378	0.036	0.431

	Student racial composition		Teaching practices	
	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	1.049***	0.352	-1.235****	0.292
Middle School	-0.194	0.392	-0.476	0.326
High School	-0.441	0.431	-0.766**	0.368
Administrator	-0.277	0.463	0.379	0.448
Male	-0.206	0.298	-0.997**	0.372
Non-tenured	-0.363	0.510	1.151**	0.441

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between School Problems and Activities for Attracting Students

To examine whether schools' activities for attracting students were commensurate with the degree of school problems perceived by teachers, two-level hierarchical non-linear regressions were conducted. Outcome variables were the degree of organizing various school activities for attracting students as indicated in the following model. The outcome variables were ordinal in scale. Main explanatory variables were the extent to which teachers viewed each problem as serious. The explanatory variables were treated as continuous to examine the direction of the associations.

Each regression has one outcome variable and one matched explanatory variable. In addition, each regression has two common control variables. One is *the gaining or losing status of school district a*t the school level. The other is *position* at the individual level.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(SP00)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(SP00) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(SP00) + d(3)

Y1 = invest in school facilities and resources
Y2 = improve school curriculum
Y3 = counsel out low-performing teachers
Y4 = improve relationships with parents
Y5 = maintain a safe environment

Y6 = improve student achievement

School Problems SP00
SP01 = lack of school resources
SP02 = inappropriate school curriculum
SP03 = quality of instruction is poor
SP04 = lack of parental involvement
SP05 = school order and discipline policies
SP06 = meeting AYP

Level-2 Model

B0 = G00 + G01*(LOSING) + U0
B1 = G10 + U1
B2 = G20 + U2

Schools' activities for attracting students did not appear to address the school problems that teachers viewed seriously. As shown in Table 6-18, it is notable that negative associations were observed between the degree to which the following school problems were perceived as serious and their effort to address those problems: *inappropriate school curriculum, lack of parental involvement, school order and discipline policies,* and *meeting AYP.* There were no statistically significant associations with respect to the other school problems.

Table 6-18: Associations between School Problems and Activities for Attracting Students

Dependent Variable	Invest in School Facilities and Resources		Improve School Curriculum		Counsel out Low-performing Teachers		Improve Relationships with Parents		Maintain a safe environment		Improve Student Achievement	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Lack of School Resources	-0.122	0.198										
Inappropriate School Curriculum			-0.613***	0.197								
Quality of Instruction is Poor					0.345	0.214						
Lack of Parental Involvement							-0.357**	0.142				
School Order and Discipline Policies									-0.756***	0.190		
Meeting AYP											-0.496***	0.157
Losing Districts	-0.238	0.393	-0.301	0.275	0.281	0.431	-0.142	0.315	0.213	0.319	-0.153	0.386
Administrators	-0.466	0.385	-0.773*	0.405	-1.591***	0.422	-0.110	0.365	-0.679	0.408	-0.903**	0.399

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between Choice Reasons and Activities for Attracting Students

To examine whether schools' activities for attracting students were commensurate with teachers' perceptions of the importance of various reasons for choosing a school, two-level multiple regressions were conducted while controlling for school characteristics. Outcome variables were the degree of organizing various school activities for attracting students as indicated in the following model. Main explanatory variables were the extent to which teachers viewed various reasons for choosing schools as serious. Each regression has one outcome variable and one matched explanatory variable. In addition, each regression has two common control variables. One is *the gaining or losing status of school district a*t the school level. The other is *position* at the individual level.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(CR00)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(CR00) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(CR00) + d(3)

Y1 = invest in school facilities and resources
Y2 = recruit more highly qualified teachers
Y3 = improve school curriculum
Y4 = counsel out low-performing teachers
Y5 = maintain a safe environment
Y6 = improve student achievement
Y7 = improve extra-curricular activities

Choice Reasons CR00

CR01 = school facilities
CR02 = teacher quality
CR03 = academic programs
CR04 = teacher quality
CR05 = safe environment
CR06 = academic performance/test scores
CR07 = extra-curricular activities

Level-2 Model

B0 = G00 + G01*(LOSING) + U0
B1 = G10 + U1
B2 = G20 + U2

As shown in Table 6-19, in the views of teachers, many school activities for attracting students seemed to be commensurate with teachers' perceptions of the importance of various reasons for choosing schools. Of seven possible school activities included in the analyses, the following five school activities were significantly and positively associated with the degree of the importance perceived by teachers regarding a given reason for choosing a school: *recruit more highly qualified teachers, improve school curriculum, maintain a safe environment, improve student achievement,* and *improve extra-curricular activities*. The other two activities were positively related but were not statistically significant.

Table 6-19: Associations between Choice Reasons and Activities for Attracting Students

	Invest in School Facilities and Resources		Recruit More Highly Qualified Teachers		Improve School Curriculum		Counsel out Low-performing Teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
School Facilities	0.277	0.170						
Teacher Quality			0.446***	0.159				
Academic Programs					0.349**	0.153		
Teacher Quality							0.226	0.197
Losing Districts	-0.132	0.401	-0.305	0.346	0.328	0.304	-0.216	0.424
Administrators	0.482	0.440	0.545	0.370	0.796*	0.400	1.523***	0.422

	Maintain a safe environment		Improve Student Achievement		Improve Extra-curricular Activities	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Safe Environment	0.669***	0.194				
Academic Performance/test Scores			0.460***	0.151		
Extra-curricular Activities					0.485***	0.160
Losing Districts	-0.490	0.429	-0.120	0.432	-0.259	0.461
Administrators	1.138**	0.448	0.876**	0.416	0.454	0.388

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Discussion

With regard to school activities for increasing student enrollment, it is first notable that both gaining and losing school districts made only a limited amount of effort to research who choice students/families were and what types of schooling options they were seeking. We may suppose that in order to develop appropriate strategies for attracting more students, districts or schools would study what factors parents consider important when they choose schools for their children, who exercises school choice options, and who does not. We need to examine the reasons why districts or schools do not make serious effort to research these issues. There could be many reasons. Administrators might assume that they already know what parents need and who choice students/families are. Thus, they might not feel the necessity for such research. However, administrators' and teachers' knowledge about choice students does not seem to be empirically supported. For example, in the surveys, about 22% of administrators and 30% of teachers responded that they did not know whether choice students were highly motivated or whether they were high achievers (see Appendix G). Another alternative explanation is that administrators did not feel that the research was necessary or they did not have enough capacity to conduct the research. This issue goes beyond the boundary of this study. Future studies may need to address this concern.

Another notable point is that while losing school districts have made more efforts in advertising than gaining school districts, gaining school districts had made more efforts to improve student achievement, maintain a safe environment, and recruit more highly qualified teachers. In order for school choice programs to be a mechanism for improving school quality, schools which are losing students to neighboring schools need

to address issues related to school quality. Advertising schools might be an effective way to attract students but that is not directly related to school improvement.

Finally, in the views of educators, the degree of organizing various activities for attracting students did not appear to be associated with the degree of competition among schools. Only a few activities were significantly associated with the degree of competition among schools but the directions of the associations were not consistent. This could imply that student enrollment changes caused by school choice programs do not strongly influence schools' responses. This could be partly explained by incentive systems which were not aligned with decreases or increases in student enrollment. From the NCE perspective, the current incentive systems might fail to motivate educators to respond to decreasing student enrollment. This could be also explained from the IBE perspective. Even though they know about enrollment changes, they might be interested in other personal issues instead of attracting more students or believe that attracting more students is not important.

In terms of school problems, both teachers and administrators appeared to think that the problems related to students or parents themselves were more serious than the problems related to educators themselves, school curriculum, or school policies. It would be hard to expect schools to make an effort to improve teaching quality or school curriculum when they do not view these as serious problems. It is also notable that administrators tended to consider school problems to be less serious than teachers. This could imply that administrators might not be active in addressing school problems even when teachers ask them to do so.

Regarding educators' perceptions of the reasons for parents' school choice decisions, we need to pay attention to teachers and administrators in losing school districts. First, educators in losing school districts were more likely than those in gaining school districts to consider the following two reasons as important factors: *location or convenience* and *student racial composition*. We could conclude that when educators in losing school districts believe that parents consider location or convenience and student racial composition when they choose schools, they might think that they have nothing to do in order to attract more students. In this context, it would be hard to expect them to make an effort to improve school quality through upgrading school curriculum or introducing extra-curricular activities. Another notable point is that educators in losing school districts seem to believe that parents in their school districts are not interested in choosing schools for their children. In this context, educators in losing school districts might not be active in doing things in order to attract more students.

School activities for attracting students did not appear to be commensurate with the degree of school problems perceived by educators. The results do not seem to support the NCE hypothesis: as a given school problem becomes more serious, schools would make greater efforts to address that problem. It is interesting that negative associations were observed between the degree to which the following were perceived as school problems and their effort to address those problems: *inappropriate school curriculum, lack of parental involvement, school order and discipline policies,* and *meeting AYP*. One could explain this by drawing on the notion that educators have different reference points (beliefs). For example, educators whose schools have serious problems with curriculum might think that their schools do not make an effort even though their schools make much

effort. In contrast, educators whose schools do not have any serious problem with curriculum might think that their schools make much effort even when their schools do not. There were no statistically significant associations with respect to the other school problems. To explain why school activities are not commensurate with school problems, the IBE perspective might be of help. At first, administrators might not know about the problems because they were not interested in school problems or they did not consider the issues as problems to be addressed. Second, administrators might not think that they should address school problems in order to attract more students. Finally, administrators might not know how to address the problems. This study does not address these issues directly.

In regard to the association between school activities for attracting students and perceptions of parents' reasons for choosing a school, the results seem to partially support the NCE hypothesis. Many school activities for attracting students seemed to be commensurate with teachers' perceptions of the importance of various reasons for choosing schools. Of seven possible school activities included in the analyses, five school activities were significantly and positively associated with the degree of the importance perceived by teachers of a given reason for choosing a school. The other two activities were positively related but were not statistically significant. Yet, there is a causality issue here. The NCE perspective assumes that parental reasons for choosing schools for their children have a casual effect on educators' actions. This finding, however, does not necessarily confirm this assumption. For example, school practices might also affect educators' perceptions, as expected from the IBE perspective. Educators at schools in affluent districts that have made greater efforts to recruit high quality teachers might

perceive that parents consider teacher quality as a more important factor when they choose schools for their children.

CHAPTER 7

IMPACT OF SCHOOL CHOICE POLICES ON EDUCATORS AND SCHOOLS

This chapter aims to address the last research question: *How do teachers and administrators perceive the impact of school choice policies on teachers and administrators themselves and their schools? Are their perceptions of the impact associated with the degree of competition among schools?* One of the various purposes of school choice policies is to improve school quality with the help of competition among schools. Teaching and leadership practices (Barnett & McCormick, 2004; Demoss, 2002; Leithwood & Jantzi, 2006; Marks & Printy, 2003), collaboration with colleagues (Goddard, Goddard, & Tschannen-Moran, 2007), curriculum(Newmann, Smith, Allensworth, & Bryk, 2001), extra-curricular activities , and relationships with parents (Henderson & Mapp, 2002) are important factors which contribute to improving school quality including student achievement. Assuming that school competition due to school choice policies would affect these factors conducive to student achievement, previous studies focused on the associations between school choice and student achievement (growth). However, previous studies failed to show a clear causal link between school choice programs and student achievement growth (Holmes et al., 2003; Hoxby, 2004; Shanker & Rosenberg, 1992). To explain this, we need to examine how school choice programs affect teaching (leadership) practices and school organization such as collaboration with colleagues, curriculum, extra-curricular activities, and relationships with parents, which are important factors in improving student achievement. Based on

teachers' and administrators' perceptions of the impact of school choice programs on educators themselves and schools, this study aims to address that issue.

According to the neoclassical economics (NCE) perspective, parents would choose schools for their children based on school quality such as school curriculum, teaching quality and methods, and student achievement. Responding to parents, schools would make an effort to improve school quality. Therefore, we can expect educators to believe that school choice programs could contribute to improving school quality by leading to improvement in their teaching (leadership) practices, programs, extra-curricular activities, and orderly environment. In addition, as competition among schools becomes intensive, educators would believe that school choice programs could contribute more to improving school quality.

However, the institutional and behavioral economics (IBE) perspective draws our attention to educators' beliefs and limited information processing capacity. Many educators might not be interested in improving school quality when they are more interested in other issues. In addition, the IBE perspective does not posit that all educators would know about student enrollment changes, suggesting the possibility that enrollment changes might fail to prompt educators to do something to attract more students. As a result, there might be no associations between the degree of competition and the degree of the impact of school choice programs on educators themselves and/or schools.

Based on the two competing perspectives, I generated two research hypotheses as follows and tested them with the surveys of administrators and teachers.

Hypothesis 4a (NCE): Educators would believe that school choice programs could contribute to improving school quality through improving their teaching (leadership)

practices, academic programs, extra-curricular activities, collaboration with colleagues, and relationships with parents. In addition, educators in schools under more intensive competition would be more likely than those in schools under less intensive competition to have these beliefs.

Hypothesis 4b (IBE): Educators might not believe that school choice programs could contribute to improving school quality through improving their teaching (leadership) practices, academic programs, extra-curricular activities, collaboration with colleagues, or relationships with parents. In addition, there might be no associations between the intensiveness of competition and their perceptions of the degree of the impact of school choice programs on educators themselves and/or schools.

Educators' Perceptions of Impact of School Choice Policies on Their Practices

To examine educators' perceptions of the impact of school choice policies on their practices, teachers and administrators were asked to indicate the extent to which they agreed that school choice policies were likely to affect each of several areas of practice. The areas of practice are seen in Table 7-1 for teachers and in Table 7-3 for administrators.

Teachers

According to teachers' perceptions, school choice policies appeared to fail to motivate teachers to improve their teaching practices, collaboration with colleagues, curriculum, extra-curricular activities, or relationships with parents. As indicated in Table 7-1, more than two-thirds of the teachers responded negatively when asked about the effects of school choice policies on efforts to improve their own teaching practice and curriculum, collaborate with colleagues, or build relationships with parents.

Table 7-1: Impact of School Choice Programs on Teachers (%)

	Strongly disagree	Disagree	Agree	Strongly agree	Total
Lead me to improve my own teaching practice (n=288)	18.4	55.9	23.3	2.4	100.0
Lead me to more collaborate with colleagues to attract more students. (n=287)	18.8	58.2	20.6	2.4	100.0
Lead me to rethink my curriculum (n=288)	18.8	54.9	24.7	1.7	100.0
Lead me to rethink my extra-curricular activities(n=283)	22.6	59.7	16.3	1.4	100.0
Lead me to improve my relationships with parents(n=286)	19.6	44.8	31.8	3.8	100.0
Mean	19.6	54.7	23.3	2.4	100.0

As shown in Table 7-2, school choice policies were more likely to affect teachers in losing school districts rather than those in gaining school districts.

Table 7-2: Impact of School Choice Programs on Teachers in Gaining and Losing School Districts

	Both	Gaining	Losing	Diff.
Lead me to improve my own teaching practice.	2.10	2.01	2.18	-.17
Lead me to more collaborate with colleagues to attract more students.	2.07	1.92	2.21	-.29
Lead me to rethink my curriculum.	2.09	1.96	2.21	-.25
Lead me to rethink my extra-curricular activities.	1.97	1.86	2.07	-.21
Lead me to improve my relationships with parents.	2.20	2.01	2.36	-.36
Mean	2.09	1.95	2.21	-.25

Note. 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree

Administrators

Administrators tended to evaluate the impact of school choice policies on themselves more positively than teachers. As Table 7-3 indicates, while 70% of the administrators responded negatively to whether school choice programs led them to improve their leadership, more than half of the administrators reported that school choice programs led them to collaborate with colleagues, rethink school curriculum, and improve relationships with parents.

Table 7-3: Impact of School Choice Programs on Administrators

	Strongly disagree	Disagree	Agree	Strongly agree	Total
Lead me to improve my leadership (n=30)	6.7	63.3	26.7	3.3	100.0
Lead me to more collaborate with colleagues to attract more students (n=30)	10.0	36.7	46.7	6.7	100.0
Lead me to rethink my school's curriculum (n=30)	6.7	36.7	50.0	6.7	100.0
Lead me to rethink my school's extra-curricular activities (n=30)	10.0	43.3	43.3	3.3	100.0
Lead me to improve my school's relationships with parents (n=30)	6.7	23.3	60.0	10.0	100.0
Mean	8.0	40.7	45.3	6.0	100.0

As shown in Table 7-4, administrators in losing school districts were more likely than those in gaining school districts to be affected by school choice programs.

Table 7-4: Impact of School Choice Programs on Administrators in Gaining and Losing School Districts

	Both	Gaining	Losing	Diff.
Lead me to improve my leadership	2.27	2.27	2.27	0.00
Lead me to more collaborate with colleagues to attract more students	2.50	2.47	2.53	-0.06
Lead me to rethink my school's curriculum	2.57	2.40	2.73	-0.33
Lead me to rethink my school's extra-curricular activities	2.40	2.20	2.60	-0.40
Lead me to improve my school's relationships with parents	2.73	2.53	2.93	-0.40

Note. 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree

Differences between Subgroups

To examine whether educators' perceptions of the impact of school choice programs on their practices were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical non-linear models. Outcome variables are seen in Table 7-4. The outcome variables were ordinal. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school. Position, tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(3)

Level-2 Model

B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As indicated in Table 7-5, educators in losing school districts were more likely than those in gaining school districts to agree that school choice programs led them to collaborate more with colleagues, rethink their curriculum and extra-curricular activities, and improve their relationships with parents. However, there were no significant difference between gaining and losing school districts in terms of whether school choice programs led them to improve their own teaching or leadership practices. Second, no statistically significant differences were observed between elementary and middle schools and between elementary and high schools. Third, administrators were more likely than teachers to agree that school choice programs led them to collaborate more with colleagues, rethink their curriculum and extra-curricular activities, and improve their

relationships with parents. However, there was no significant difference between administrators and teachers with regard to the impact of school choice policies on teaching (leadership) practices. Finally, there were no significant differences between male and female educators or between tenured and non-tenured educators.

Table 7-5: Differences between Subgroups in Educators' Perceptions of the Impact of School Choice Programs on their Practices

	Teaching (leadership)		Collaboration		Curriculum		Extra-curricular activities		Relationship with parents	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	0.351	0.309	0.579*	0.325	0.617**	0.265	0.589*	0.302	0.695**	0.283
Middle School	-0.062	0.374	-0.247	0.390	-0.043	0.314	-0.304	0.358	-0.366	0.343
High School	-0.295	0.380	-0.649	0.398	-0.058	0.322	-0.266	0.372	-0.224	0.344
Administrator	0.697	0.416	1.359***	0.472	1.561***	0.465	1.380***	0.479	1.662***	0.469
Male	-0.370	0.291	-0.014	0.291	-0.464	0.294	-0.015	0.325	-0.107	0.285
Non-tenured	-0.107	0.399	0.004	0.417	-0.085	0.365	0.218	0.413	0.215	0.383

Note. *** $P \leq 0.01$; ** $P \leq 0.05$; * $P \leq 0.10$. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Association between School Competition and Educators' Perceptions of the Impact of School Choice Programs on their Practices

In order to examine whether educators' perceptions of the impact of school choice programs on their practices were associated with the degree of competition among schools, two-level non-linear regressions were employed. The degree of competition was measured by *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* In this study, it was assumed that educators in losing school districts and at schools with decreasing student enrollment and smaller percentages of choice students would feel competition to a greater extent than their counterparts.

There were two models for each outcome variable. Model 1 for each outcome variable examined the relationship between the outcome variable and the explanatory variables with only one control variable included in the model. The explanatory variables were *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* As a common control variable for both Model 1 and Model 2, the position variable (administrator or teacher) at the individual level was included. For Model 2, the following control variables at the school level were added in Model 2 for each outcome variable: *student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch,* and *the percentage of minority students.*

Level-1 Model

$$\text{Prob}[R = 1|B] = P'(1) = P(1)$$
$$\text{Prob}[R <= 2|B] = P'(2) = P(1) + P(2)$$
$$\text{Prob}[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)$$
$$\text{Prob}[R <= 4|B] = 1.0$$

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + d(3)

Level-2 Model

Model 1
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + U0
B1 = G10 + U1

Model 2
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + G04*(TSRATIO) + G05*(SCHSIZE) + G06*(LOFUND) + G07*(FRL) + U0
B1 = G10 + U1

Educators' perceptions of the impact of school choice policies on their practices did not tend to be associated with the intensiveness of competition among schools. First, in Model 1, educators in losing school districts were more likely than those in gaining school districts to agree that school choice policies led them to improve their teaching or leadership practices, rethink their curriculum and extra-activities, collaborate with their colleagues, and improve relationships with parents (see Table 7-6). However, the differences between gaining and losing school districts disappeared after controlling for school socioeconomic factors (see Table 7-7). Second, no significant associations between educators' perceptions and percentages of enrollment changes were observed. Finally, in Model 1, there were positive associations between educators' perceptions and the percentages of choice students. However, these associations disappeared after controlling for school socioeconomic factors.

Table 7-6: Association between School Competition and Educators' Perceptions of the Impact of School Choice Programs on their Practices (Model 1)

	Teaching (leadership)		Collaboration		Curriculum		Extra-curricular activities		Relationship with parents	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.605	0.384	1.360***	0.434	1.417***	0.399	1.364***	0.393	1.523***	0.438
Losing Districts	1.055***	0.363	1.347***	0.403	1.019***	0.324	1.312***	0.357	1.316***	0.374
% of Enrollment Changes	-0.003	0.009	-0.003	0.010	-0.008	0.008	0.003	0.009	-0.001	0.009
% of Choice Students	0.043***	0.015	0.042**	0.016	0.030**	0.013	0.040**	0.015	0.030*	0.015

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Table 7-7: Association between School Competition and Educators' Perceptions of the Impact of School Choice Programs on their Practices (Model 2)

	Teaching (leadership)		Collaboration		Curriculum		Extra-curricular activities		Relationship with parents	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.608	0.384	1.364***	0.435	1.476***	0.419	1.375***	0.391	1.516***	0.424
Losing Districts	-0.239	0.653	-0.095	0.765	-0.157	0.682	-0.173	0.664	0.323	0.694
% of Enrollment Change	0.007	0.011	0.008	0.013	0.004	0.011	0.014	0.011	0.013	0.012
% of Choice Students	-0.014	0.024	-0.016	0.029	-0.017	0.025	-0.019	0.025	-0.019	0.026
Student/Teacher Ratio	0.085	0.076	0.113	0.087	0.046	0.079	0.098	0.079	0.125	0.079
School Size	-0.097*	0.048	-0.149**	0.058	-0.063	0.050	-0.119**	0.048	-0.075	0.052
Local Funding	-0.030	0.019	-0.029	0.023	-0.027	0.020	-0.039	0.019	-0.008	0.021
% of FRL	0.013	0.008	0.005	0.010	0.010	0.009	0.005*	0.009	0.020**	0.009
% of Minority	0.015	0.016	0.027	0.019	0.021	0.016	0.028*	0.016	0.007	0.017

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Educators' Perceptions of the Impact of School Choice Policies on Their Schools

To examine educators' perceptions of the impact of school choice policies on their schools and education in general, teachers and administrators were asked to indicate the extent to which they agreed with each of possible contributions which school choice policies could make. The possible contributions listed on the surveys are seen in Table 7-8.

Teachers

According to teachers' responses, school choice programs did not appear to contribute much to improving school quality and education in general. As indicated in Table 7-8, most teachers agreed that school choice programs brought about competition among schools. However, competition among schools did not seem to cause school improvement in terms of school programs, student achievement, reducing socioeconomic segregation in education, serving the interests of schools for low-income or minority students, or teacher working conditions.

Noticeably, teachers in losing school districts were more likely than teachers in gaining school districts to disagree that school choice programs can reduce socioeconomic segregation in education, serve the interests of schools serving low-income or minority students, or lead schools to provide better working conditions for teachers.

Table 7-8: Teachers' Perceptions of the Impact of School Choice Programs on Schools

	Both	Gaining	Losing	Diff.
Contribute to improving school programs.	2.37	2.41	2.33	0.08
Contribute to improving student achievement.	2.28	2.32	2.23	0.09
Reduce socioeconomic segregation in education.	2.03	2.23	1.86	0.37
Bring about competition among schools.	2.93	2.94	2.93	0.01
Serve the interests of schools serving low-income or minority students.	2.11	2.27	1.98	0.29
Lead schools to provide better working conditions for teachers.	1.93	2.07	1.82	0.25

Note. 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree. Clustering of educators within schools was ignored.

Administrators

Most administrators seemed to agree that school choice programs brought about competition among schools (see Table 7-9). In addition, administrators appeared to agree that school choice programs contribute to improving school programs and enhancing student achievement. However, administrators did not seem to agree that school choice programs reduced socioeconomic segregation in education, served the interests of schools serving low-income or minority students, or led schools to provide better working conditions for teachers. Administrators in gaining school districts were more likely than those in losing school districts to agree that school choice programs reduced socioeconomic segregation in education and served the interests of schools serving low-income or minority students.

Table 7-9: Administrators' Perceptions of the Impact of School Choice Programs on Schools

	Both	Gaining	Losing	Diff.
School choice programs contribute to improving school programs.	2.67	2.67	2.67	0.00
School choice programs contribute to improving student achievement.	2.60	2.40	2.80	-0.40
School choice programs reduce socioeconomic segregation in education.	2.10	2.33	1.86	0.47
School choice programs bring about competition among schools.	3.20	3.07	3.33	-0.26
School choice programs serve the interests of schools serving low-income or minority students.	1.97	2.20	1.73	0.47
School choice programs lead schools to provide better working conditions for teachers.	2.20	2.33	2.07	0.26

Note. 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree. Clustering of educators within schools was ignored.

Teachers vs. Administrators

Administrators were more likely than teachers to think that school choice programs could contribute to school improvement. As shown in Table 7-10, administrators were more likely than teachers to agree that school choice programs improved school programs and student achievement, brought about competition among schools, and led schools to provide better working conditions for teachers. However, teachers were more likely than administrators to agree that school choice programs served the interests of schools serving low-income or minority students.

Table 7-10: Differences in the Perceptions of the Impact of School Choice Programs on Schools between Teachers and Administrators

	Teach.	Admi.	Diff.
School choice programs contribute to improving school programs.	2.37	2.67	-.30
School choice programs contribute to improving student achievement.	2.28	2.60	-.33
School choice programs reduce socioeconomic segregation in education.	2.03	2.10	-.07
School choice programs bring about competition among schools.	2.93	3.20	-.27
School choice programs serve the interests of schools serving low-income or minority students.	2.11	1.97	.14
School choice programs lead schools to provide better working conditions for teachers.	1.93	2.20	-.27

Note. 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree. Clustering of educators within schools was ignored.

As Table 7-11 indicates, the differences between administrators' and teachers' perceptions of the impact of school choice programs on schools were larger in losing school districts than in gaining school districts.

Table 7-11: Differences in the Perceptions of the Impact of School Choice Programs on Schools between Teachers and Administrators in Gaining and Losing School Districts

	Gaining School Districts			Losing School Districts		
	Teach.	Admi.	Diff.	Teach.	Admi.	Diff.
School choice programs contribute to improving school programs.	2.41	2.67	-.25	2.33	2.67	-.34
School choice programs contribute to improving student achievement.	2.32	2.40	-.08	2.23	2.80	-.57
School choice programs reduce socioeconomic segregation in education.	2.23	2.33	-.10	1.86	1.86	.00
School choice programs bring about competition among schools.	2.94	3.07	-.13	2.93	3.33	-.41
School choice programs serve the interests of schools serving low-income or minority students.	2.27	2.20	.07	1.98	1.73	.25
School choice programs lead schools to provide better working conditions for teachers.	2.07	2.33	-.26	1.82	2.07	-.25

Note. 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree. Clustering of educators within schools was ignored.

Differences between Subgroups

To examine whether educators' perceptions of the impact of school choice programs on their schools and education were significantly different between subgroups related to position (administrator or teacher), gender, tenure, the gaining or losing status of their school districts, or school level, I conducted two-level hierarchical non-linear models. Outcome variables were seen in Table 7-12. The outcome variables were ordinal. Regarding explanatory variables, the following variables at the school level were included: *the gaining or losing status of school districts, middle school,* and *high school. Position*, *tenure* and *gender* at the individual level were included. The models are as follows.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(MALE) + B3*(NONTENUR) + d(3)

Level-2 Model

B0 = G00 + G01*(LOSING) + G02*(MIDDLE) + G03*(HIGH) + U0
B1 = G10 + U1
B2 = G20 + U2
B3 = G30 + U3

As shown in Table 7-12, educators in losing schools were less likely than those in gaining schools to agree that school choice programs reduced socioeconomic segregation in education, served the interests of schools accommodating low-income or minority students, or led schools to provide better working conditions. There were no significant differences between gaining and losing school districts with regard to the other possible contributions of school choice programs. Second, educators in middle schools were less likely than those in elementary schools to agree that school choice programs brought about competition among schools and led schools to provide better working conditions. Educators in high schools were less likely to agree that school choice programs led schools to provide better working conditions. Third, administrators were more likely than teachers to agree that school choice programs contributed to improving school programs and student achievement, brought about competition among schools, and led schools to provide better working conditions. Fourth, there were no significant differences between male and female educators. Finally, non-tenured educators were more likely than tenured educators to agree that school choice programs brought about competition among schools and led schools to provide better working conditions.

Table 7-12: Differences between Subgroups in Educators' Perceptions of the Impact of School Choice Programs on their Schools and Education in General

	Improving school programs		Improving student achievement		Reduce socioeconomic segregation in education	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	-0.448	0.324	-0.316	0.271	-1.125***	0.268
Middle School	-0.668*	0.388	0.004	0.333	-0.260	0.311
High School	-0.734*	0.408	-0.590*	0.341	-0.461	0.327
Administrator	0.972*	0.494	0.962*	0.499	0.118	0.431
Male	-0.068	0.304	0.209	0.361	0.288	0.353
Non-tenured	0.263	0.342	0.448	0.326	0.333	0.314

	Bring about competition among schools		Serve the interests of schools serving low-income or minority students		Provide better working conditions for teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Losing Districts	0.249	0.255	-0.813***	0.241	-1.143***	0.312
Middle School	-0.531*	0.292	-0.319	0.275	-0.801**	0.374
High School	-0.420	0.318	-0.390	0.300	-1.190***	0.377
Administrator	0.810*	0.464	-0.236	0.408	1.087**	0.451
Male	0.491	0.377	0.071	0.367	-0.189	0.338
Non-tenured	0.668*	0.341	0.530	0.331	0.884**	0.378

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between School Competition and Perceptions of the Impact of School Choice Programs on Schools and Education

In order to examine whether educators' perceptions of the impact of school choice programs on their schools and education are associated with the intensiveness of competition among schools, two-level non-linear regressions were employed. The degree of competition was measured by school location (gaining district or losing district), student enrollment changes over the past five years, and the percentage of choice students. In this study, it was assumed that educators in losing school districts and at schools with decreasing student enrollment and smaller percentages of choice students would feel competition to a greater extent than their counterparts.

There were two models for each outcome variable. Model 1 for each outcome variable examined the relationship between the outcome variable and the explanatory variables with only one control variable included in the model. The explanatory variables were *school location (gaining district or losing district), student enrollment changes over the past five years,* and *the percentage of choice students.* As a common control variable for both Model 1 and Model 2, the position variable (administrator or teacher) at the individual level was included. For Model 2, the following control variables at the school level were added in Model 2 for each outcome variable: *student/teacher ratio, school size, local funding, the percentage of students eligible for free and reduced lunch,* and *the percentage of minority students.*

Level-1 Model

$$\text{Prob}[R = 1|B] = P'(1) = P(1)$$
$$\text{Prob}[R <= 2|B] = P'(2) = P(1) + P(2)$$
$$\text{Prob}[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)$$
$$\text{Prob}[R <= 4|B] = 1.0$$

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + d(3)

Level-2 Model

Model 1
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + U0
B1 = G10 + U1

Model 2
B0 = G00 + G01*(LOSING) + G02*(ENROLCHG) + G03*(CHOICE) + G04*(TSRATIO) + G05*(SCHSIZE) + G06*(LOFUND) + G07*(FRL) + U0
B1 = G10 + U1

Overall, educators' perceptions of contributions of school choice programs did not appear to be associated with the intensiveness of school competition. As shown in Table 7-13 educators in losing school districts were less likely than those in gaining school districts to agree that school choice programs contributed to improving student achievement. In addition, they were more likely than those in gaining school districts to agree that school choice programs reduced socioeconomic segregation in education and brought about competition among schools. However, after controlling for school socioeconomic factors, no significant differences were observed between gaining and losing school districts (see Table 7-14).

Second, there were no significant associations between educators' perceptions and the percentage of enrollment changes in Model 1. However, after controlling for school socioeconomic factors, educators in schools where student enrollment increased during

the past five years were more likely to agree that school choice programs served the interests of schools serving low-income or minority students. Finally, educators in schools with higher percentages of choice students were more likely than educators in schools with smaller percentages of choice students to agree that school choice programs contributed to improving school programs, reduced socioeconomic segregation in education, brought about competition among schools, and provided better working conditions for teachers. However, these differences disappeared after controlling for school socioeconomic factors.

Table 7-13: Associations between School Competition and Perceptions of the Impact of School Choice Programs on Schools and Education (Model 1)

	Improving school programs		Improving student achievement		Reduce socioeconomic segregation in education	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.882**	0.422	0.097	0.410	0.889**	0.421
Losing Districts	0.634	0.432	-1.111***	0.355	0.681*	0.335
% of Enrollment Changes	0.016	0.011	0.012	0.009	0.001	0.009
% of Choice Students	0.038**	0.018	-0.018	0.015	0.032**	0.014

	Bring about competition among schools		Serve the interests of schools serving low-income or minority students		Provide better working conditions for teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.889**	0.421	-0.345	0.370	0.893**	0.429
Losing Districts	0.681*	0.335	-0.411	0.323	0.330	0.417
% of Enrollment Changes	0.001	0.009	0.016*	0.008	0.012	0.011
% of Choice Students	0.032**	0.014	0.003	0.013	0.058***	0.018

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Table 7-14: Associations between School Competition and Perceptions of the Impact of School Choice Programs on Schools and Education (Model 2)

	Improving school programs		Improving student achievement		Reduce socioeconomic segregation in education	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.936**	0.439	0.931**	0.422	0.163	0.389
Losing Districts	-0.143	0.781	-0.388	0.751	-0.893	0.678
% of Enrollment Change	0.022	0.013	0.005	0.013	0.018	0.012
% of Choice Students	-0.005	0.030	-0.006	0.029	-0.019	0.026
Student/Teacher Ratio	0.038	0.089	-0.034	0.085	-0.074	0.077
School Size	-0.048	0.059	-0.024	0.057	0.018	0.050
Local Funding	-0.031	0.024	-0.035	0.023	0.020	0.020
% of FRL	0.013	0.010	0.002	0.010	0.011	0.009
% of Minority	-0.003	0.019	0.010	0.018	-0.017	0.016

	Bring about competition among schools		Serve the interests of schools serving low-income or minority students		Provide better working conditions for teachers	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Administrators	0.892**	0.432	-0.336	0.366	0.851*	0.431
Losing Districts	0.532	0.723	-0.799	0.628	-0.433	0.767
% of Enrollment Change	-0.001	0.013	0.028**	0.011	0.017	0.014
% of Choice Students	0.019	0.028	-0.019	0.023	0.020	0.030
Student/Teacher Ratio	0.071	0.083	-0.093	0.074	-0.096	0.088
School Size	-0.050	0.054	0.031	0.046	-0.034	0.059
Local Funding	-0.006	0.022	-0.014	0.018	-0.040	0.023
% of FRL	0.001	0.009	0.015*	0.008	0.005	0.010
% of Minority	-0.003	0.018	-0.003	0.015	0.001	0.019

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Associations between Educators' Perceptions of School Choice Reasons and their Perceptions of the Impact of School Choice Programs on Schools

Two-level multiple regressions were conducted to explore whether educators' perceptions of various reasons for choosing schools were associated with their perceptions of the impact of school choice programs on schools. Outcome variables were the degree, perceived by teachers, of the impact of school choice programs on schools. Major explanatory variables were the degree of importance of various reasons for choosing a school.

Each model has one outcome variable and one explanatory variable matched with it. In addition, each regression has two common control variables. One is *the gaining or losing status of school district* at the school level. The other is *position* at the individual level.

Level-1 Model

Prob[R = 1|B] = P'(1) = P(1)
Prob[R <= 2|B] = P'(2) = P(1) + P(2)
Prob[R <= 3|B] = P'(3) = P(1) + P(2) + P(3)
Prob[R <= 4|B] = 1.0

where

P(1) = Prob[Y(1) = 1|B]
P(2) = Prob[Y(2) = 1|B]
P(3) = Prob[Y(3) = 1|B]

log[P'(1)/(1 - P'(1))] = B0 + B1*(ADMINIST) + B2*(Choice Reasons)
log[P'(2)/(1 - P'(2))] = B0 + B1*(ADMINIST) + B2*(Choice Reasons) + d(2)
log[P'(3)/(1 - P'(3))] = B0 + B1*(ADMINIST) + B2*(Choice Reasons) + d(3)

Y1 = improve school programs
Y2 = improve student achievement
Y3 = reduce socioeconomic segregation in education
Y4 = provide better working conditions

Choice Reasons CR00
CR01 = academic programs
CR02 = extra-curricular activities
CR03 = academic performance/test scores
CR04 = socio-economic status of the community
CR05 = student racial composition
CR06 = teacher quality
CR07 = teaching practices

Level-2 Model

B0 = G00 + G01*(LOSING) + U0
B1 = G10 + U1
B2 = G20 + U2

Even though educators agreed that parents chose schools based on some reasons related to school improvement or education development, they did not appear to agree that school choice programs led to school improvement or educational development. As shown in Table 7-15, educators' perceptions of the importance of each school choice reason were not statistically associated with their expectations of their impact on schools except for *teacher quality* and *teaching practices*. Educators who considered *teacher quality and teaching practices* as more important factors were more likely to agree that school choice programs led schools to provide better working conditions. No statistically significant associations between teachers' perceptions of school choice reasons and their perceptions of the impact of school choice programs on schools were observed with respect to the other items.

Table 7-15: Associations between Educators' Perceptions of School Choice Reasons and their Perceptions of the Impact of School Choice Programs on Schools

	Improve School Programs				Improve Student Achievement	
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Academic Programs	-0.072	0.164				
Extra-curricular Activities			-0.143	0.167		
Academic Performance/test scores					-0.004	0.157
Losing District	-0.256	0.345	-0.133	0.309	-0.162	0.266
Administrators	0.739*	0.409	0.678	0.426	0.889*	0.463

	Reduce Socioeconomic Segregation in Education				Provide Better Working Conditions			
			Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.
Socio-economic status of the community	-0.106	0.145						
Student Racial Composition			-0.101	0.128				
Teacher Quality					0.389*	0.201		
Teaching Practices							0.409**	0.154
Losing District	-1.214***	0.290	-1.134***	0.295	-0.666*	0.351	-0.769**	0.343
Administrators	0.240	0.484	0.025	0.429	0.797*	0.430	1.076**	0.438

Note. *** P≤0.01; ** P≤0.05; * P≤0.10. Each multilevel model has an unreported intercept as well as unreported error variances for the intercept and the slope(s).

Discussion

In sum, the findings in this chapter did not seem to support the neoclassical economics (NCE) perspective that educators would believe that school choice programs could contribute to improving school quality through improving their teaching (leadership) practices, academic programs, extra-curricular activities, collaboration with colleagues, and relationships with parents. In addition, the findings did not support the NCE perspective's assumption that educators in schools under more intensive competition would be more likely than those in schools under less intensive competition to have these beliefs.

First, we need to note that school choice policies did not tend to motivate educators to improve their teaching or leadership practices as the NCE perspective expected. More than two-thirds of the teachers responded negatively when asked about the effects of school choice policies on efforts to improve their own teaching practice and curriculum, collaborate with colleagues, or build relationships with parents. In addition, even though administrators tended to evaluate the impact of school choice policies on their practices more positively than teachers, still a higher portion of the administrators had a negative view of this impact. Seventy percent of the administrators responded negatively to whether school choice programs led them to improve their leadership, and only half of the administrators reported that school choice programs led them to collaborate with colleagues or rethink school extra-curriculum activities.

Second, the intensiveness of competition among schools did not seem to influence educators' practices related to school improvement. Educators' perceptions of the impact of school choice policies on their practices did not tend to be associated with the

intensiveness of competition among schools. After school socioeconomic factors were controlled for, the gaining or losing status of school districts, the percentage of enrollment changes, and the percentage of choice students were found to not be associated with educators' perceptions.

Third, school choice programs did not appear to contribute much to improving school quality and education in general. Most teachers agreed that school choice programs brought about competition among schools. However, competition among schools did not seem to cause school improvement in terms of improving school programs, increasing student achievement, reducing socioeconomic segregation in education, serving the interests of schools for low-income or minority students, or improving teacher working conditions.

Finally, educators' perceptions of the contributions of school choice programs did not appear to be associated with the intensiveness of school competition. After school socioeconomic factors were controlled for, the gaining or losing status of school districts, the percentage of enrollment changes, and the percentage of choice students were found to not be associated with educators' perceptions. In addition, even though educators agreed that parents chose schools based on some reasons related to school improvement or education development, they did not appear to agree that school choice programs led to school improvement or educational development.

As I discussed in chapter 4, many educators were not aware of student enrollment changes; thus, it would make sense that the intensiveness of competition among schools was not associated with their perceptions of the impact of school choice programs on their practices and schools. In addition, incentive systems were not aligned with changes

in student enrollment, and this also could influence educators' perceptions of the impact of school choice programs on their practices and schools. Educators might not be interested in attracting more students by improving school quality.

CHAPTER 8

IMPLICATIONS FOR POLICY AND FUTURE RESEARCH

In this chapter, I first briefly summarize the background of this research, theoretical framework, and research questions. The findings regarding the research questions are followed. I then use the findings to draw some implications for policy. Finally, I provide some thoughts on the limitations of this study and some implications for future research on school choice policies.

Background of This Research, Theoretical Framework, and Research Questions

Previous studies on school choice policies focused primarily on the impact of school choice programs on students' academic achievement, assuming that school competition due to school choice policies would affect educators' practices and school programs conducive to student achievement. However, previous studies generally failed to show a clear causal link between school choice programs and student achievement growth (Hoxby, 2004; Shanker & Rosenberg, 1992; Witte, 1996). To address this, we need to examine whether this popular assumption is valid in practice. To this end, this study examined how administrators and teachers responded to school choice policies based on interviews and surveys. Two competing economics perspectives provided useful insights into examining the issue: the neoclassical economics (NCE) perspective (Friedman, 1962; Samuelson, 1973) and the institutional and behavioral economics (IBE) perspective (Hirschman, 1970; Schmid, 2004). These theories have different assumptions with regard to human actions, the roles of a market and government (or institutions), and

the performance of a market. Regarding educators' responses to school choice policies, the NCE and IBE perspectives have different expectations.

According to the NCE perspective, parents would make rational choice based on school quality with perfect information. Educators' incentive systems would be aligned with decreases or increases in student enrollment. To attract more students to their schools, educators would do research on what parents want as rational consumers of educational services, evaluate their own and competitors' (competing schools') strengths or weaknesses, and develop effective responses. As a result, school choice programs are believed to contribute to improving school quality.

In contrast, the IBE perspective posits that school competition could be limited due to parents' limited information, limited capacity with regard to information processing, and avoidance of competition. In addition, parents might choose schools based on status ideology or convenient location rather than factors that constitute school quality. In terms of educators, they also have limited information, limited capacity with regard to information processing, or beliefs inconsistent with expectations from the NCE perspective. Consequently, they might fail to be aware of student enrollment changes, might not be interested in increasing student enrollment, might not know how to attract students, or show socially inappropriate market behaviors such as cost creaming (Arsen et al., 1999; Ni & Arsen, 2008), watering down curriculum, or cream skimming (Lacireno-Paquet et al., 2002). Therefore, school choice programs might not contribute to improving school quality. The IBE perspective allows us to pay attention to parents' and educators' beliefs, capacity, and actual behaviors.

Base on literature review and the NCE and the IBE perspectives, this study posed the following four research questions.

1. How much are teachers and school administrators aware of changes in enrollment? Do schools have incentive systems aligned with decreases or increases in student enrollment?

2. How are schools/districts that lose students as part of school choice policies (i.e., losing schools/districts) different from schools/districts that gain students (i.e., gaining schools/districts) in terms of teachers' working conditions such as available time and resources for teachers, leadership, and opportunities for professional development? Are teachers' working conditions associated with the intensiveness of school competition?

3. What are schools doing to attract students? Is the degree of organizing activities for attracting more students associated with school competition? Are the activities associated with school problems or parents' school choice reasons?

4. How do teachers and administrators perceive the impact of school choice policies on teachers and administrators themselves and their schools? Are their perceptions of the impact associated with the degree of competition among schools?

Summary of the Findings and Discussion

In Chapter 4, I addressed Research Question 1. First, it is notable that many educators did not know about recent student enrollment changes or the portion of choice students at their schools. Even though administrators were more likely than teachers to know about student enrollment changes and the percentage of students at their schools,

we could say that a large portion of administrators still did not know about them considering their position. It is important for educators to know about student enrollment changes in that their awareness of the changes could be a signal that they should take appropriate actions to address them.

Second, public schools seem to fail to build market incentives for educators. In terms of job security, salaries, and benefits, more than two-thirds of teachers and administrators responded that they were not affected by changes in student enrollment at all or they were affected only to some extent. This implies that the current incentive systems for educators may have limitations in motivating educators to be aware of student enrollment changes or to improve school quality in order to attract more students.

Third, as expected from the IBE perspective, in a school where it can be assumed that the same incentive systems are applied to all teachers, teachers perceived the degree of the impact of student enrollment changes on their job security, salary, and benefits differently. In a given policy context, it is important that schools build incentive systems that impact teachers' job security, salaries, and benefits enough to motivate educators to do some actions in order to attract more students.

Finally, the findings did not support either the NCE or the IBE perspective about the relationship between *the degree of impact of student enrollment changes on teachers' job security, salary, and benefits* and *the degree of their awareness of enrollment changes and the percentage of choice students in their schools. The degree of impact of student enrollment changes on teachers with regard to job security, salary, and benefits* was not significantly associated with *their awareness of student enrollment changes and the percentage of choice students in their schools.* In addition, the degree of competition

among schools was not associated with educators' awareness of student enrollment changes and the percentage of choice students.

In Chapter 5, I addressed Research Question 2. Simple comparison of teachers' working conditions indicated that schools in gaining school districts had better working conditions than schools in losing school districts. However, most differences between gaining and losing school districts (except for *facilities and resources)* disappeared when school characteristics were controlled for. The intensiveness of school competition was not significantly associated with teachers' working conditions except for *facilities and resources*. As a result, it is difficult to retain the NCE hypothesis that as competition among schools becomes more intensive, schools will make more efforts to improve working conditions. Instead, teachers' working conditions appeared to be associated with individual characteristics such as the status of tenure and school environment such as local funding, student socioeconomic composition, and school level. In addition, the likelihood that other latent factors not included in this study might affect teachers' working conditions cannot be excluded.

It is notable that the rejection of the NCE hypothesis does not necessarily imply that educators' responses were not rational. When we look at the limited impact of student enrollment changes on administrators' and teachers' job security, salaries, and benefits, it makes sense that teachers' working conditions were not associated with the degree of school competition. In addition, administrators might think that their schools already have adequate working conditions for teachers; thus, they might not see the need to improve working conditions. As rational actors, educators might have chosen other strategies to attract more students. This issue is beyond the scope of this study. The

clearer point here is that we cannot expect that school choice programs will lead schools to provide better working conditions conducive to student achievement and school improvement.

Regarding the IBE hypothesis, this study has limitations in confirming that administrators and teachers do not know the importance of working conditions or how to improve them. However, the large gap between teachers' and administrators' perceptions regarding teachers' working conditions suggests the possibility that administrators might not have clear knowledge about teachers' working conditions. The IBE perspective also suggests that even when administrators know about the importance of improving teachers' working conditions and how to improve them, they might not be interested in doing so.

In Chapter 6, I addressed Research Question 3. With regard to school activities for increasing student enrollment, it is first notable that both gaining and losing school districts made only a limited amount of effort to research who choice students/families are and what types of schooling options they are seeking. We may suppose that in order to develop appropriate strategies for attracting more students, districts or schools would study about the factors their parents consider important when they choose schools for their children, who exercises school choice options, and who does not. We need to examine the reasons why districts or schools do not make serious efforts to research these issues. There could be many reasons. Administrators might assume that they already know what parents need and who choice students/families are. Thus, they might not feel the necessity for such research. However, administrators' and teachers' knowledge about choice students does not seem to be empirically supported in the surveys. Another alternative explanation is that administrators did not feel that the research was necessary

or they did not have enough capacity to conduct the research. This issue goes beyond the scope of this study. Future studies may need to address this concern.

Another notable point is that while losing school districts made more efforts in advertising than gaining school districts, gaining school districts made more efforts in improving student achievement, maintaining safe environment, and recruiting more highly qualified teachers. In order for school choice programs to be a mechanism for improving school quality, schools which are losing students to neighboring schools need to address issues related to school quality. Advertising schools might be an effective way to attract students, but that is not directly related to school improvement.

Finally, in the views of educators, the degree of organizing various activities for attracting students did not appear to be associated with the degree of competition among schools. Only a few activities were significantly associated with the degree of competition among schools but the directions of the associations were not consistent. This could imply that student enrollment changes caused by school choice programs do not strongly influence schools' responses. This could be partly explained by incentive systems which were not aligned with changes in student enrollment. From the NCE perspective, the current incentive systems might fail to motivate educators to respond to decreasing student enrollment. This could be also explained from the IBE perspective. Even though they know about enrollment changes, they might be interested in other issues instead of attracting more students, or they might believe that attracting more students is not important.

In terms of school problems, both teachers and administrators appeared to think that the problems related to students or parents themselves were more serious than the

problems related to educators themselves, school curriculum, or school policies. It would be hard to expect that schools would make an effort to improve teaching quality or school curriculum when they did not view these as serious problems. It is also notable that administrators tended to consider school problems to be less serious than teachers. This could imply that administrators might not be active in addressing schools problems even when teachers ask them to do so.

Regarding educators' perceptions of the reasons for parents' school choice decisions, we need to pay attention to teachers and administrators in losing school districts. First, educators in losing school districts were more likely than those in gaining school districts to consider the following two reasons as important factors: *location or convenience* and *student racial composition*. We could conclude that when educators in losing school districts believe that parents consider location or convenience and student racial composition when they choose schools, they might think that they have nothing to do in order to attract more students. In this context, it would be hard to expect them to make an effort to improve school quality through upgrading school curriculum or introducing new extra-activities. Another notable point is that educators in losing school districts seem to believe that parents in their school districts are not interested in choosing schools for their children. In this context, educators in losing school districts might not be active in taking some actions in order to attract more students.

School activities for attracting students did not appear to be commensurate with the degree of school problems perceived by educators. The results do not seem to support the NCE hypothesis: as a given school problem becomes more serious, schools would make greater efforts to address that problem. It is interesting that negative associations

were observed between the degree of the following school problems and their effort to address those problems: *inappropriate school curriculum, lack of parental involvement, school order and discipline policies,* and *meeting AYP.* There were no statistically significant associations with respect to the other school problems.

To explain why school activities are not commensurate with school problems, the IBE perspective might be of help. First, administrators might not know about the problems because they were not interested in them or they did not consider the issues as problems to be addressed. Second, administrators might not think that they should address school problems in order to attract more students. Finally, administrators might not know how to address the problems. This study does not address these issues directly.

In regard to the association between school activities for attracting students and the reasons for choosing a school, the results seem to partially support the NCE hypothesis. Many school activities for attracting students seemed to be commensurate with teachers' perceptions of the importance of various reasons for choosing schools. Of seven possible school activities included in the analyses, five school activities were significantly and positively associated with the degree of the importance perceived by teachers of a given reason for choosing a school. The other two activities were positively related but were not statistically significant.

In Chapter 7, I addressed Research Question 4. In sum, the findings in this chapter did not seem to support the neoclassical economics (NCE) perspective that educators would believe that school choice programs could contribute to improving school quality through improving their teaching (leadership) practices, academic programs, extra-curricular activities, collaboration with colleagues, or relationships with parents. In

addition, the findings did not support the NCE perspective that educators in schools under more intensive competition would be more likely than those in schools under less intensive competition to believe that.

First, we need to note that school choice policies did not tend to motivate educators to improve their teaching or leadership practices as the NCE perspective expected. More than two-thirds of the teachers responded negatively when asked about the effects of school choice policies on efforts to improve their own teaching practice and curriculum, collaborate with colleagues, and build relationships with parents. In addition, even though administrators tended to evaluate the impact of school choice policies on their practices more positively than teachers, still a higher portion of the administrators had a negative view of this impact. Seventy percent of the administrators responded negatively to whether school choice programs led them to improve their leadership, and only half of the administrators reported that school choice programs led them to collaborate with colleagues and rethink school extra-curriculum activities.

Second, the intensiveness of competition among schools did not seem to influence educators' practices related to school improvement. Educators' perceptions of the impact of school choice policies on their practices did not tend to be associated with the intensiveness of competition among schools. After school socioeconomic factors were controlled for, the gaining or losing status of school districts, the percentage of enrollment changes, and the percentage of choice students were found not to be associated with educators' perceptions.

Third, school choice programs did not appear to contribute much to improving school quality and education in general. Most teachers agreed that school choice

programs brought about competition among schools. However, competition among schools did not seem to cause school improvement in terms of school programs, student achievement, reducing socioeconomic segregation in education, serving the interests of schools for low-income or minority students, or teacher working conditions.

Finally, educators' perceptions of the contributions of school choice programs did not appear to be associated with the intensiveness of school competition. After school socioeconomic factors were controlled for, the gaining or losing status of school districts, the percentage of enrollment changes, and the percentage of choice students were found to not be associated with educators' perceptions. In addition, even though educators agreed that parents chose schools based on some reasons related to school improvement or education development, they did not appear to agree that school choice programs led to school improvement or educational development.

As I discussed in chapter 4, many educators were not aware of student enrollment changes; thus, it would make sense that the intensiveness of competition among schools was not associated with their perceptions of the impact of school choice programs on their practices and schools. In addition, incentive systems were not aligned with changing student enrollment, and this also could influence educators' perceptions of the impact of school choice programs on their practices and schools. Educators might not be interested in attracting more students by improving school quality.

Implications for Policy and Practice

Based on the findings, I propose three general implications for policy and practices. First, policymakers need to be aware that school choice programs under current contexts have limitations in improving school quality. Teachers' perceptions of the

degree of organizing various activities for attracting students under school choice programs revealed that schools and districts did not make much effort in order to increase student enrollment. Educators tended to think that the problems related to students or parents were more serious than the problems related to educators themselves. It would be hard to expect schools to make an effort to improve teaching quality or the school curriculum when they did not view these as serious problems. In addition, school activities for attracting students did not appear to be commensurate with the degree of school problems perceived by educators.

Second, policymakers should make more effort to research who choice students and families are and what types of schooling options they are seeking. For example, in order to develop appropriate strategies for attracting more students, districts or schools need to know what factors parents consider important when they choose schools for their children, who exercises school choice options, and who does not. This does not imply that school systems try to meet parents' needs uncritically because parents' needs might be in conflict with the goals of public education. For instance, when parents choose schools based on status ideology, educators could limit parental choice or encourage parents to choose based on school quality.

Third, policymakers need to pay close attention to individual differences among educators. Educators do not attach the same meaning to the same incentive or sanctions. For example, in a school where it can be assumed that the same incentive systems are applied to teachers in the school, teachers perceived the degree of impact of student enrollment changes on their job security, salaries, and benefits differently. Therefore, in a given policy context, it is important that schools build incentive systems that impact

teachers' job security, salaries, and benefits enough to motivate educators to take some actions in order to attract more students. It is also notable that there might be a difference between administrators and teachers with regard to making sense of school problems or issues. For instance, administrators might think that their schools already have adequate working conditions for teachers. However, teachers might not think so.

Finally, policymakers need to pay attention to educators' capacity to analyze and develop strategies along with physical resources. This study did not focus on whether educators have enough capacity to analyze and develop strategies, but the finding that educators did not make much effort to research who choice students/families were implies that educators might not have the capacity.

Limitations of the Study and Implications for Future Research

There are several limitations of this study which can be addressed by future research. The research findings in this study show the limitations of this study and suggest a need for further studies. First, this study showed that educators did not know a lot about student enrollment changes and the percentage of choice students within their schools. To explain this, this study examined the association between incentive systems for educators and their awareness. However, the association was found to be statistically insignificant. This study did not focus on examining the reasons why educators were not aware of enrollment changes or the percentage of choice students or why their awareness was not associated with the incentive systems. Further studies need to address these issues.

Second, this study found that schools and districts did not make much effort to attract more students and that there were no significant associations between activities for

attracting more students and the intensiveness of competition among schools. However, the reasons for these findings were not fully examined in this study. Incentive systems for educators which were not aligned with changes in student enrollment could explain this, but there might be other reasons. For example, educators might not have enough capacity to develop appropriate strategies for attracting more students or schools might not have enough resources to do these. Future studies need to explore these reasons.

Third, educators tended to consider the problems related to students or parents more serious than the problems related to educators themselves. In addition, school activities for attracting students did not seem to be commensurate with the seriousness of school problems perceived by educators. Many reasons could explain these findings. For example, educators might not know about the problems or they might place more emphasis on other issues. Future studies need to address these reasons in order to give practical implications to policy and practices.

Finally, this study found that educators tended to evaluate the effects of school choice programs on their practices and schools negatively. However, this study did not address the reasons why educators viewed school choice programs this way. Research that examines these reasons would be beneficial for policymakers and others.

There were also some technical limitations with this study, particularly concerning the generalizability of the findings. This study tried to represent public schools which were affected by school choice programs by intentionally recruiting public schools which varied in the portion of choice students and the student enrollment changes. In addition, the response rates were adequate to address the research questions, with a 65.3% for the administrator survey and a 60.1% for the teacher survey from 30 schools in

the state of Michigan. However, this study was limited geographically since it was conducted in one state (Michigan). Schools and districts in other states might have different policy contexts, which might contribute to different responses by educators to changes in enrollment and school choice policies. Therefore, it is important to consider the policy contexts when we interpret the research findings. Additionally, this study was based on educators' perceptions, but their perceptions might not represent reality. For example, we cannot exclude the likelihood that educators' perceptions of the degree of organizing activities for attracting more students might be different from reality. Another source of problems in the surveys is social desirability bias (Hays, Hayashi, & Stewart, 1989). Educators in this study might have answered in a socially desirable, rather than in a truthful manner. For example, educators tended to consider school problems related to students or parents as more serious than those related to educators themselves. This could be either true representation or the result of social desirability bias. I cannot fully exclude the possibility of social desirability bias.

Although there are limitations with this study, the findings from this research do add to previous research on school choice policies. First, this study builds on prior research by focusing on school competition in traditional public schools. While there are many studies which compared public schools with private schools (Benveniste et al., 2003; Chubb & Moe, 1990) or public schools with charter schools (Miron & Nelson, 2002) to examine the effects of school competition, there are few research studies which have focused on traditional public schools (Arsen et al., 1999; Ni & Arsen, 2008). Second, this study challenges the basic assumptions of proponents of school choice policies by addressing educators' responses to school choice policies. According to school choice

proponents, in a free education market where parents choose schools for their kids and schools make efforts to attract more students, parents will choose the most appropriate schools for their children with perfect information about available schools in order to maximize their interests or preferences. In addition, school systems will create market incentives under which educators get rewards such as job security, a bonus, or a raise when they attract more students and get sanctions or penalties such as a wage cut or loss of their jobs when they lose students. In order to get rewards by attracting more students, educators will make efforts to meet parents' needs or preferences, evaluate and compare their own programs with those of competing schools, and reduce costs (Friedman, 1962; Hoxby, 2003). This study found that public school systems did not create market incentive systems aligned with changes in student enrollment and that educators in public schools did not seem to make much effort to research what parents desired for their children's schools.

Finally, by introducing the institutional and behavioral perspective to research on school choice policies, this study encourages scholars of school choice policies to pay attention to educators' limited information, their capacity for information processing, and their beliefs. There are many research studies on parents' limited information, their capacity for information processing and their beliefs with respect to school choice policies (Holme, 2002; Martinez et al., 1996; Schneider & Buckley, 2002), but there have been few studies on educators' access to information, capacity for processing information, or beliefs. Although there are many studies in other areas of education which share the fundamental ideas of the IBE perspective (even though they did not use the term), the implication from those findings did not apply to school choice policy studies. For

example, curriculum reform studies have shown educators' limited capacity for processing new information (Cohen & Ball, 1990; Spillane, 2004). This study addressed educators' information and capacity issues by showing that educators had limited information about student enrollment changes and that they might not have appropriate capacity to cope with changes in student enrollment.

APPENDICES

APPENDIX A: ADMINISTRATOR SURVEY INSTRUMENT

Study of How School Administrators and Teachers Respond to School Choice Policies in Michigan Administrator Survey

This survey is part of a research project that examines how school administrators and teachers respond to school choice policies in several Michigan school districts.

We want you to know that:

1. We are asking you these questions to better understand how school choice policies impact school administrators and teachers in Michigan.
2. Your name, the name of your school, the name of your district, and your responses to the questions in this survey will be kept strictly confidential among members of the research team at Michigan State University.
3. The survey should take about 20 to 30 minutes to complete. You may skip any questions you do not wish to answer; however, we hope that you will answer as many questions as you can.

If you desire further information about this research study, you may contact Peter Youngs, School Choice Study, 364 Erickson Hall, Dept. of Teacher Education, Michigan State University, E. Lansing, MI 48824. You may also contact Dr. Youngs by email at pyoungs@msu.edu or by phone at (517) 353-4348. Thank you very much!

Questions A1-A4 ask about your school, your role in your school, and the teachers in your school.

A1. Your school is an . . .

Mark (X) only one	
Elementary school	○
Middle school	○
High school	○

A2. Please indicate your position:

Mark (X) only one	
Principal	○
Assistant Principal	○
Other *(please specify):* _____	○

A3. How many students were enrolled in your school as of fall 2008?

_____ students

A4. How many full-time classroom teachers were teaching your school as of fall 2008?

_____ teachers

Questions B1-B9 ask about the teacher working conditions in your school.

B1. To what extent do you agree with each of the following statements about the use of time in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers have reasonable class sizes, affording them time to meet the educational	O	O	O	O	O
Teachers have time available to collaborate with their colleagues.	O	O	O	O	O
The non-instructional time provided for teachers in my school is sufficient.	O	O	O	O	O
Teachers are protected from duties that interfere with their essential role of educating	O	O	O	O	O
Efforts are made to minimize the amount of routine administrative paperwork I am	O	O	O	O	O

B2. To what extent do you agree with each of the following statements about your school facilities and resources?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers have sufficient access to appropriate instructional materials and resources.	O	O	O	O	O
Teachers have sufficient access to communications technology, including	O	O	O	O	O
Teachers have sufficient access to office equipment and supplies such as copy	O	O	O	O	O
Teachers have sufficient access to instructional technology.	O	O	O	O	O
Teachers have adequate professional space to work productively.	O	O	O	O	O
Teachers and staff work in a school environment that is safe.	O	O	O	O	O

B3. To what extent do you agree with each of the following statements about empowerment in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers are centrally involved in decision-making about educational issues.	O	O	O	O	O
Teachers are trusted to make sound professional decisions about instruction.	O	O	O	O	O
Teachers are recognized as educational professionals.	O	O	O	O	O
In this school, we take steps to solve problems.	O	O	O	O	O
The faculty has an effective process for making group decisions and solving problems.	O	O	O	O	O

B4. To what extent do you agree with the following statements about your leadership as an administrator?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor	Agree	Strongly agree
There is an atmosphere of trust and mutual respect within the school.	O	O	O	O	O
Teachers feel comfortable raising issues and concerns that are important to them.	O	O	O	O	O
The school leadership communicates clear expectations to students and parents.	O	O	O	O	O
The school leadership consistently enforces rules for student conduct.	O	O	O	O	O
School leaders effectively communicate	O	O	O	O	O
Teachers are held to high professional standards for delivering instruction.	O	O	O	O	O
Teacher performance evaluations are fair in my school.	O	O	O	O	O
Teachers receive feedback that can help them improve teaching.	O	O	O	O	O

B5. To what extent do you agree with the following statements about collegial support in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
All of the faculty are committed to helping every student learn.	O	O	O	O	O
Most of the teachers at this school share my beliefs and values about what the central mission of the school should be.	O	O	O	O	O
Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.	O	O	O	O	O
Teachers do favors for each other.	O	O	O	O	O
Teachers believe that their students have the ability to achieve academically.	O	O	O	O	O

B6. To what extent do you agree with each of the following statements about professional development in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Sufficient resources are available to allow teachers to take advantage of professional	O	O	O	O	O
Professional development provides teachers with the knowledge and skills most needed to	O	O	O	O	O
Teachers are provided opportunities to learn from one another.	O	O	O	O	O
Adequate time is provided for professional development.	O	O	O	O	O

B7. In your opinion, to what extent is each of the following considered a barrier to the dismissal of poor-performing or incompetent teachers in this school?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Personnel policies	O	O	O	O	O
Termination decisions not upheld	O	O	O	O	O
Length of time required for termination process	O	O	O	O	O
Effort required for documentation	O	O	O	O	O
Tight deadlines for completing documentation	O	O	O	O	O
Tenure	O	O	O	O	O
Teacher associations or unions	O	O	O	O	O
Dismissal is too stressful and/or uncomfortable for you	O	O	O	O	O
Difficulty in obtaining suitable replacements	O	O	O	O	O
Resistance from parents	O	O	O	O	O

B8. To what extent is each of the following a problem in your school?

Mark (X) one box for each row	Not a problem	Minor problem	Moderate problem	Serious Problem
Student tardiness	O	O	O	O
Student absenteeism	O	O	O	O
Students class cutting	O	O	O	O
Students dropping out	O	O	O	O
Student apathy (lack of engagement)	O	O	O	O

B9. To what extent is each of the following a problem in your school?

Mark (X) one box for each row	Not a problem	Minor problem	Moderate problem	Serious Problem
Lack of parental involvement	O	O	O	O
Poverty	O	O	O	O
Students come to school unprepared	O	O	O	O
Poor student health	O	O	O	O
Lack of school resources	O	O	O	O
Quality of instruction is poor	O	O	O	O
Inappropriate school curriculum	O	O	O	O
School order and discipline policies	O	O	O	O
Teacher absenteeism	O	O	O	O
Decrease in student enrollment	O	O	O	O
Increase in student enrollment	O	O	O	O
Meeting Adequate Yearly Progress (AYP)	O	O	O	O

Questions B10-B12 ask about your commitment to your school and your work effort as a principal.

B10. To what extent do you agree with each of the following statements?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
The stress and disappointment involved in serving as an administrator at this school aren't really worth it.	O	O	O	O
The faculty and staff at this school like being here; I would describe them as a satisfied group.	O	O	O	O
I like the way things are run at this district.	O	O	O	O
If I could get a higher paying job, I'd leave education as soon as possible.	O	O	O	O
I think about transferring to another school.	O	O	O	O
I don't seem to have as much enthusiasm now as I did when I began my career as an administrator.	O	O	O	O
I think about staying home from school because I'm just too tired to go.	O	O	O	O

B11. Including hours spent during the school day, before and after school, and on the weekends, how many hours do you spend on ALL school-related activities during a typical full week at this school?

_____ hours

B12. How many days per year are you required to work under your current contract?

_____ days

Questions C1-C12 ask about school choice policies.

C1. During this school year (2008-09), how many times have you talked with your staff about enrollment changes in your school?

Mark (X) only one			
None	O	6 to 8 times	O
Less than 3 times	O	More than 8 times	O
4 to 5 times	O	Not sure	O

C2. Please indicate how much enrollment has changed in your school over the past five years (2004-05 to 2008-09).

Mark (X) only one			
No change	O	Less than 10% decrease	O
Less than 10% increase	O	10 % to 20% decrease	O
10% to 20% increase	O	20% to 30% decrease	O
20% to 30% increase	O	More than 30% decrease	O
More than 30% increase	O	Don't know	O

C3. What percentage of the students in your school in 2008-09 are students from other school districts?

Mark(X) only one			
None	O	20% to 30%	O
Less than 10%	O	More than 30%	O
10% to 20%	O	Don't know	O

C4. To what extent do you agree with each of the following statements about choice students?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree	Not Sure
Choice students are highly motivated.	O	O	O	O	O
Choice students are high achievers.	O	O	O	O	O
Choice students come from higher socio-economic backgrounds.	O	O	O	O	O
There are no differences between choice students and non-choice students.	O	O	O	O	O
I try to identify the choice students who are in my school.	O	O	O	O	O

C5. To what extent have changes in student enrollment affected you with regard to the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Job security	O	O	O	O	O
Salary	O	O	O	O	O
Benefits	O	O	O	O	O

C6. To what extent have changes in student enrollment affected your staff with regard to the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Job security	O	O	O	O	O
Salary	O	O	O	O	O
Benefits	O	O	O	O	O

C7. When parents in your school district choose schools for their children, to what extent do you think they consider each of the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Location or convenience	O	O	O	O	O
Safe environment (school order and discipline)	O	O	O	O	O
Socio-economic status of the community	O	O	O	O	O
School facilities	O	O	O	O	O
Academic performance/test scores	O	O	O	O	O
Academic programs	O	O	O	O	O
Extra-curricular activities	O	O	O	O	O
Teacher quality	O	O	O	O	O
School resources	O	O	O	O	O
School reputation and history	O	O	O	O	O
Student racial composition	O	O	O	O	O
Teaching practices	O	O	O	O	O

C8. When your school has attracted students from or lost students to neighboring schools, to what extent have there been differences between your school and the neighboring schools with regard to each of the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Location or convenience	O	O	O	O	O
Safe environment (school order and	O	O	O	O	O
Socio-economic status of the community	O	O	O	O	O
School facilities	O	O	O	O	O
Academic performance/test scores	O	O	O	O	O
Academic programs	O	O	O	O	O
Extra-curricular activities	O	O	O	O	O
Teacher quality	O	O	O	O	O
School resources	O	O	O	O	O
School reputation and history	O	O	O	O	O
Student racial composition	O	O	O	O	O
Teaching practices	O	O	O	O	O

C9. To what extent has your school or school district done each of the following in order to increase student enrollment?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Advertise school	O	O	O	O	O
Invest in school facilities and resources	O	O	O	O	O
Recruit more highly qualified teachers	O	O	O	O	O
Improve school curriculum	O	O	O	O	O
Counsel out low-performing teachers	O	O	O	O	O
Improve relationships with parents	O	O	O	O	O
Maintain a safe environment (school order	O	O	O	O	O
Improve student achievement	O	O	O	O	O
Improve extra-curricular activities	O	O	O	O	O
Research who choice students/families are and what types of schooling options they are	O	O	O	O	O

C10. To what extent do you think the following activities can contribute to increasing student enrollment in your school?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Advertise school	O	O	O	O	O
Invest in school facilities and resources	O	O	O	O	O
Recruit more highly qualified teachers	O	O	O	O	O
Improve school curriculum	O	O	O	O	O
Counsel out low-performing teachers	O	O	O	O	O
Improve relationships with parents	O	O	O	O	O
Maintain a safe environment (school order	O	O	O	O	O
Improve student achievement	O	O	O	O	O
Improve extra-curricular activities	O	O	O	O	O
Research who choice students/families are and what types of schooling options they are	O	O	O	O	O

C11. To what extent do you agree with each of the following statements about how school choice affects you?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
School choice programs lead teachers to improve my leadership.	O	O	O	O
School choice programs lead me to more collaborate with colleagues to attract more students.	O	O	O	O
School choice programs lead me to rethink my school's curriculum.	O	O	O	O
School choice programs lead me to rethink my school's extra-curricular activities.	O	O	O	O
School choice programs lead me to improve my school's relationships with parents.	O	O	O	O

C12. To what extent do you agree with each of the following statements about how school choice affects your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
School choice programs contribute to improving school programs.	O	O	O	O
School choice programs contribute to improving student achievement.	O	O	O	O
School choice programs reduce socioeconomic segregation in education.	O	O	O	O
School choice programs bring about competition among schools.	O	O	O	O
School choice programs serve the interests of schools serving low-income or minority students.	O	O	O	O
School choice programs lead schools to provide better working conditions for teachers.	O	O	O	O
My school has enough capacity to readily cope with student enrollment decreases/increases.	O	O	O	O

Questions D1-D8 ask about your background information.

D1. How many years have you been working in this school, including 2008-09?

Mark (X) only one	
1-3	O
4-8	O
9-12	O
More than 13	O

D2. How many years have you worked as an administrator in K-12 schools, including 2008-09?

Mark (X) only one	
1-3	O
4-8	O
9-12	O
More than 13	O

D3. How many years did you work as a full-time teacher in K-12 schools?

Mark (X) only one	
1-3	O
4-8	O
9-12	O
More than 13	O

D4. Were you transferred to this school in the past three years (i.e., since the beginning of the 2006-07 school year)?

Mark (X) only one	
Yes	O
No (Go to D5 below)	O

D4-1. If so, were you transferred to this school because of declining enrollments in your previous school?

Mark (X) only one	
Yes	O
No (Go to D5 below)	O

D4-2. If so, were the enrollment decreases in your previous school due to school choice policies?

Mark (X) only one	
Yes	O
No	O

D5. What is the highest degree you have earned?

Mark (X) only one	
Bachelor's degree	O
Master's degree	O
Doctoral degree	O
Other *(please specify)*_____	O

D6. Please indicate your gender:

Mark (X) only one	
Female	O
Male	O

D7. Are you Hispanic?

Mark (X) only one	
Yes	O
No	O

D8. Please indicate your race/ethnicity:

Mark (X) only one	
Caucasian	O
African American	O
Asian/Pacific Islander	O
Native American	O
Other *(please specify)*_____	O

E1. So that we can record your participation in this research study, please provide your full name and the name of your school below. Your name, the name of your school, and the name of your district will not be used in any data analysis, reports or publications.

Your full name: _____ Your school name: _____

If you would like to make any comments in response to any of the survey questions, please do so here:

_____

_____

_____

_____

Thank you for your time!

Please return the completed survey by _____ *in the enclosed envelope to:*

Peter Youngs, School Choice Study
364 Erickson Hall
Michigan State University, College of Education
E. Lansing, MI 48824

If you have any questions about this study, please contact:

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APPENDIX B: TEACHER SURVEY INSTRUMENT

Study of How School Administrators and Teachers Respond to School Choice Policies in Michigan
Teacher Survey

This survey is part of a research project that examines how school administrators and teachers respond to school choice policies in several Michigan school districts.

We want you to know that:

1. We are asking you these questions to better understand how school choice policies impact teachers and school administrators in Michigan.
2. Your name, the name of your school, the name of your district, and your responses to the questions in this survey will be kept strictly confidential among members of the research team at Michigan State University.
3. The survey should take about 20 to 30 minutes to complete. You may skip any questions you do not wish to answer; however, we hope that you will answer as many questions as you can.

If you desire further information about this research study, you may contact Peter Youngs, School Choice Study, 364 Erickson Hall, Dept. of Teacher Education, Michigan State University, E. Lansing, MI 48824. You may also contact Dr. Youngs by email at pyoungs@msu.edu or by phone at (517) 353-4348. Thank you very much!

Questions A1-A4 ask about your school and your roles in your school.

A1. Which statement best describes your primary role at your school?

Mark (X) only one	
I teach the same class of students all or most of the day in multiple subjects	O
I teach one class of students in one subject	O
I teach several classes of students in one subject	O
I teach several classes of students in one grade	O
I serve as a classroom aide or assistant teacher	O
Other *(please specify):* _____	O

A2. Which of the following non-teaching duties do you have at your school?

Mark (X) all that apply	
Administrator	O
Guidance counselor	O
School reform/improvement coach or facilitator	O
Program coordinator	O
Master/mentor teacher or teacher consultant	O
I do not have any non-teaching duties	O
Other *(please specify):* _____	O

A3. During your most recent full week of teaching at this school, what was the total number of students enrolled in the classes you taught?

_____ students

A4. During your most recent full week of teaching at this school, what was the average number of students you taught at any one time?

_____ students

Questions B1-B8 ask about the teacher working conditions in your school.

B1. To what extent do you agree with each of the following statements about the use of time in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers have reasonable class sizes, affording them time to meet the educational needs of all students.	O	O	O	O	O
Teachers have time available to collaborate with their colleagues.	O	O	O	O	O
The non-instructional time provided for teachers in my school is sufficient.	O	O	O	O	O
Teachers are protected from duties that interfere with their essential role of educating	O	O	O	O	O
Efforts are made to minimize the amount of routine administrative paperwork I am required to do.	O	O	O	O	O

B2. To what extent do you agree with each of the following statements about your school facilities and resources?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers have sufficient access to appropriate instructional materials and resources.	O	O	O	O	O
Teachers have sufficient access to communications technology, including phones, faxes and email.	O	O	O	O	O
Teachers have sufficient access to office equipment and supplies such as copy machines, paper, chalk, etc.	O	O	O	O	O
Teachers have sufficient access to instructional technology.	O	O	O	O	O
Teachers have adequate professional space to work productively.	O	O	O	O	O
Teachers and staff work in a school environment that is safe.	O	O	O	O	O

B3. To what extent do you agree with each of the following statements about empowerment in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Teachers are centrally involved in decision-making about educational issues.	O	O	O	O	O
Teachers are trusted to make sound professional decisions about instruction.	O	O	O	O	O
Teachers are recognized as educational professionals.	O	O	O	O	O
In this school, we take steps to solve problems.	O	O	O	O	O
The faculty has an effective process for making group decisions and solving problems.	O	O	O	O	O

B4. To what extent do you agree with the following statements about leadership in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
There is an atmosphere of trust and mutual respect within the school.	O	O	O	O	O
Teachers feel comfortable raising issues and concerns that are important to them.	O	O	O	O	O
The school leadership communicates clear expectations to students and parents.	O	O	O	O	O
The school leadership consistently enforces rules for student conduct.	O	O	O	O	O
School leaders effectively communicate policies.	O	O	O	O	O
Teachers are held to high professional standards for delivering instruction.	O	O	O	O	O
Teacher performance evaluations are fair in my school.	O	O	O	O	O
Teachers receive feedback that can help them improve teaching.	O	O	O	O	O

B5. To what extent do you agree with the following statements about collegial support in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
There is an atmosphere of trust and mutual respect among teachers.	O	O	O	O	O
All of the faculty are committed to helping every student learn.	O	O	O	O	O
Most of my colleagues share my beliefs and values about what the central mission of the school should be.	O	O	O	O	O
Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.	O	O	O	O	O
Teachers do favors for each other.	O	O	O	O	O
Teachers believe that their students have the ability to achieve academically.	O	O	O	O	O

B6. To what extent do you agree with each of the following statements about professional development in your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Sufficient resources are available to allow teachers to take advantage of professional	O	O	O	O	O
Professional development provides teachers with the knowledge and skills most needed to	O	O	O	O	O
Teachers are provided opportunities to learn from one another.	O	O	O	O	O
Adequate time is provided for professional development.	O	O	O	O	O

B7. To what extent is each of the following a problem in your school?

Mark (X) one box for each row	Not a problem	Minor problem	Moderate problem	Serious Problem
Student tardiness	O	O	O	O
Student absenteeism	O	O	O	O
Students class cutting	O	O	O	O
Students dropping out	O	O	O	O
Student apathy (lack of engagement)	O	O	O	O

B8. To what extent is each of the following a problem in your school?

Mark (X) one box for each row	Not a problem	Minor problem	Moderate problem	Serious Problem
Lack of parental involvement	O	O	O	O
Poverty	O	O	O	O
Students come to school unprepared	O	O	O	O
Quality of instruction is poor	O	O	O	O
Lack of school resources	O	O	O	O
Poor teaching quality	O	O	O	O
Inappropriate school curriculum	O	O	O	O
School order and discipline policies	O	O	O	O
Teacher absenteeism	O	O	O	O
Decrease in student enrollment	O	O	O	O
Increase in student enrollment	O	O	O	O
Meeting Adequate Yearly Progress (AYP)	O	O	O	O

Questions C1-C7 ask about your teaching practices and your perceptions of your school.

C1. Please indicate the extent to which each statement describes you as a teacher in relation to students:

Mark (X) one box for each row	Not at all like me	A little like me	Somewh at like me	A lot like me	Not sure
I solve all problems that students raise.	O	O	O	O	O
I respect students' choices and values.	O	O	O	O	O
I effectively use instructional time to teach students according to their needs.	O	O	O	O	O
I know what each student is doing.	O	O	O	O	O
Order and discipline come first in my classroom.	O	O	O	O	O
I set high standards for student performance.	O	O	O	O	O

C2. To what extent do you agree with each of the following statements about student ability and learning?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Student ability is more fixed than variable.	O	O	O	O	O
Success in learning is directly related to the amount of effort a student is willing to expend.	O	O	O	O	O
I believe I can influence a student's learning.	O	O	O	O	O

C3. To what extent do you agree with each of the following statements about accountability in education?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
I am responsible for student achievement.	O	O	O	O
Parents are responsible for student achievement.	O	O	O	O
The whole school, including all teachers, principals, and other staff, should be responsible for student achievement.	O	O	O	O
I should change my teaching if students don't perform well on standardized tests.	O	O	O	O

C4. In the past 12 months, how many hours have you participated in each of the following activities?

Mark (X) one box for each row	None	8 hours or less	9-16 hours	17-32 hours	33 hours or more
Professional development activities specific to and concentrating on the content of the subject you teach	O	O	O	O	O
Professional development activities that focused on student discipline and management in the classroom	O	O	O	O	O
Professional development activities that focused on school improvement	O	O	O	O	O

C5. Including hours spent during the school day, before and after school, and on the weekends, how many hours do you spend on ALL teaching and other school-related activities during a typical FULL WEEK at THIS school?

_____ hours

C6. How many hours are you required to work to receive BASE PAY during a typical FULL WEEK at THIS school?

_____ hours

C7. To what extent do you agree with each of the following statements?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
The stress and disappointment involved in teaching at this school aren't really worth it.	O	O	O	O
The teachers at this school like being here; I would describe us a satisfied group.	O	O	O	O
I like the way things are run at this school.	O	O	O	O
If I could get a higher paying job, I'd leave teaching as soon as possible.	O	O	O	O
I think about transferring to another school.	O	O	O	O
I don't seem to have as much enthusiasm as I did when I began teaching.	O	O	O	O
I think about staying home from school because I'm just too tired to go.	O	O	O	O

Questions D1-D11 ask about school choice policies.

D1. During this school year (2008-09), how many times did you hear about enrollment changes in your school from the principal or central office?

Mark (X) only one			
None	O	6 to 8 times	O
Less than 3 times	O	More than 8 times	O
4 to 5 times	O	Not sure	O

D2. Please indicate how much enrollment has changed in your school over the past five years (2004-05 to 2008-09).

Mark (X) only one			
No change	O	Less than 10% decrease	O
Less than 10% increase	O	10% to 20% decrease	O
10% to 20% increase	O	20% to 30% decrease	O
20% to 30% increase	O	More than 30% decrease	O
More than 30% increase	O	Don't know	O

D3. What percentage of the students in your school in 2008-09 are choice students from other school districts?

Mark (X) only one			
None	O	20% to 30%	O
Less than 10%	O	More than 30%	O
10% to 20%	O	Don't know	O

D4. To what extent do you agree with each of the following statements about choice students?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree	Not sure
Choice students are highly motivated.	O	O	O	O	O
Choice students are high achievers.	O	O	O	O	O
Choice students come from higher socio-economic backgrounds.	O	O	O	O	O
There are no differences between choice students and non-choice students.	O	O	O	O	O
I try to identify the choice students who are in my classes.	O	O	O	O	O

D5. To what extent have changes in student enrollment affected you with regard to the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Job security	O	O	O	O	O
Salary	O	O	O	O	O
Benefits	O	O	O	O	O

D6. When parents in your school district choose schools for their children, to what extent do you think they consider each of the following?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Location or convenience	O	O	O	O	O
Safe environment (school order and discipline)	O	O	O	O	O
Socio-economic status of the	O	O	O	O	O
School facilities	O	O	O	O	O
Academic performance/test scores	O	O	O	O	O
Academic programs	O	O	O	O	O
Extra-curricular activities	O	O	O	O	O
Teacher quality	O	O	O	O	O
School resources	O	O	O	O	O
School reputation and history	O	O	O	O	O
Student racial composition	O	O	O	O	O
Teaching practices	O	O	O	O	O

D7. When your school has attracted students from or lost students to neighboring schools, to what extent have there been differences between your school and the neighboring schools?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Location or convenience	O	O	O	O	O
Safe environment (school order and discipline)	O	O	O	O	O
Socio-economic status of the	O	O	O	O	O
School facilities	O	O	O	O	O
Academic performance/test scores	O	O	O	O	O
Academic programs	O	O	O	O	O
Extra-curricular activities	O	O	O	O	O
Teacher quality	O	O	O	O	O
School resources	O	O	O	O	O
School reputation and history	O	O	O	O	O
Student racial composition	O	O	O	O	O
Teaching practices	O	O	O	O	O

D8. To what extent has your school or school district done each of the following in order to increase student enrollment?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Advertise school	O	O	O	O	O
Invest in school facilities and	O	O	O	O	O
Recruit more highly qualified teachers	O	O	O	O	O
Improve school curriculum	O	O	O	O	O
Counsel out low-performing teachers	O	O	O	O	O
Improve relationships with parents	O	O	O	O	O
Maintain a safe environment (school order and discipline)	O	O	O	O	O
Improve student achievement	O	O	O	O	O
Improve extra-curricular activities	O	O	O	O	O
Research who choice students/families are and what types of schooling options they are seeking	O	O	O	O	O

D9. To what extent do you think the following activities can contribute to increasing student enrollment in your school?

Mark (X) one box for each row	Not at all	Some extent	Moderate extent	Great extent	Not sure
Advertise school	O	O	O	O	O
Invest in school facilities and	O	O	O	O	O
Recruit more highly qualified teachers	O	O	O	O	O
Improve school curriculum	O	O	O	O	O
Counsel out low-performing teachers	O	O	O	O	O
Improve relationships with parents	O	O	O	O	O
Maintain a safe environment (school order and discipline)	O	O	O	O	O
Improve student achievement	O	O	O	O	O
Improve extra-curricular activities	O	O	O	O	O
Research who choice students/families are and what types of schooling options they are seeking	O	O	O	O	O

D10. To what extent do you agree with each of the following statements about how school choice affects you?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
School choice programs lead me to improve my own teaching practice.	O	O	O	O
School choice programs lead me to more collaborate with colleagues to attract more students.	O	O	O	O
School choice programs lead me to rethink my curriculum.	O	O	O	O
School choice programs lead me to rethink my extra-curricular activities.	O	O	O	O
School choice programs lead me to improve my relationships with parents.	O	O	O	O

D11. To what extent do you agree with each of the following statements about how school choice affects your school?

Mark (X) one box for each row	Strongly disagree	Disagree	Agree	Strongly agree
School choice programs contribute to improving school programs.	O	O	O	O
School choice programs contribute to improving student achievement.	O	O	O	O
School choice programs reduce socioeconomic segregation in education.	O	O	O	O
School choice programs bring about competition among schools.	O	O	O	O
School choice programs serve the interests of schools serving low-income or minority students.	O	O	O	O
School choice programs lead schools to provide better working conditions for teachers.	O	O	O	O
My school has enough capacity to readily cope with student enrollment decreases/increases.	O	O	O	O

Questions E1-E11 ask about your background information.

E1. How many years have you been working in this school, including 2008-09?

Mark (X) only one	
1	O
2-3	
4-8	O
9-12	O
More than 13	O

E2. How many years have you worked as a full-time teacher in K-12 schools, including 2008-09?

Mark (X) only one	
1-3	O
4-8	O
9-12	O
More than 13	O

E3. Were you transferred to this school in the past three years (i.e., since the beginning of the 2006-07 school year)?

Mark (X) only one	
Yes	O
No (Go to E4 below)	O

E3-1. If so, were you transferred to this school because of declining enrollments in your previous school?

Mark (X) only one	
Yes	○
No (Go to E4 below)	○

E3-2. If so, were the enrollment decreases in your previous school due to school choice policies?

Mark (X) only one	
Yes	○
No	○

E4. Are you a tenured teacher?

Mark (X) only one	
Yes	○
No	○

E5. What is the highest level of formal education you have completed?

Mark (X) only one	
Bachelor's degree	○
Master's degree	○
Doctoral degree	○
Other *(please specify)* _____	○

E6. Which of the following describes the teaching certificate you currently hold in Michigan?

Mark (X) only one	
Regular or standard state certificate or advanced professional certificate	○
Certificate issued after satisfying all requirements except the completion of a probationary period	○
Certificate that requires some additional coursework, student teaching, or passage of a test before regular certification can be obtained	○
I do not hold any of the above certifications in Michigan	○

E7. This school year, are you a highly Qualified Teacher (HQT) according to Michigan's requirements?

(Generally, to be Highly Qualified, teachers must meet requirements related to 1) having a bachelor's degree, 2) earning full state certification, and 3) demonstrating competency in the subject area(s) taught. The HQT requirement is a provision under No Child Left Behind (NCLB))

Mark (X) only one	
Yes	O
No	O

E8. Please indicate your gender:

Mark (X) only one	
Female	O
Male	O

E9. Are you Hispanic?

Mark (X) only one	
Yes	O
No	O

E10. Please indicate your race/ethnicity:

Mark (X) only one	
Caucasian	O
African American	O
Asian/Pacific Islander	O
Native American	O
Other (*please specify*)_____	O

E11. Your school is an . . .

Mark (X) only one	
Elementary school	O
Middle school	O
High school	O

F1. So that we can record your participation in this research study, please provide your full name and the name of your school below. Your name, the name of your school, and the name of your district will not be used in any data analysis, reports or publications.

Your full name: _____ Your school name: _____

If you would like to make any comments in response to any of the survey questions, please do so here:

_____

_____

_____

_____

Thank you for your time!

Please return the completed survey by _____ *in the enclosed envelope to:*

Peter Youngs, School Choice Study
364 Erickson Hall
Michigan State University, College of Education
E. Lansing, MI 48824

If you have any questions about this study, please contact:

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APPENDIX C: FACTOR ANALYSIS AND RELIABILITY CHECK FOR TEACHERS' WORKING CONDITIONS: TEACHER SURVEY

1. Use of Time

A3-1: Component Matrix

	Component 1
B1TimeUse4	.765
B1TimeUse2	.733
B1TimeUse3	.731
B1TimeUse5	.661
B1TimeUse1	.582

A3-2: Reliability Statistics

Cronbach's Alpha	N of Items
.733	5

2. Facilities and Resources

A3-3: Component Matrix

	Component 1
B2SchFacility3	.781
B2SchFacility4	.760
B2SchFacility1	.760
B2SchFacility5	.755
B2SchFacility2	.754
B2SchFacility6	.695

A3-4: Reliability Statistics

Cronbach's Alpha	N of Items
.841	6

3. Empowerment

A3-5: Component Matrix

	Component 1
B3Empower3	.883
B3Empower4	.882
B3Empower1	.863
B3Empower2	.852
B3Empower5	.824

A3-6: Reliability Statistics

Cronbach's Alpha	N of Items
.912	5

4. Leadership

A3-7: Component Matrix

	Component 1
B4Leadership3	.894
B4Leadership5	.891
B4Leadership1	.879
B4Leadership2	.846
B4Leadership4	.821
B4Leadership8	.789
B4Leadership7	.775
B4Leadership6	.565

A3-8: Reliability Statistics

Cronbach's Alpha	N of Items
.926	8

5. Collegial Support

A3-9: Component Matrix

	Component 1
B5ColleSupport3	.825
B5ColleSupport2	.782
B5ColleSupport1	.777
B5ColleSupport6	.760
B5ColleSupport4	.731
B5ColleSupport5	.666

A3-10: Reliability Statistics

Cronbach's Alpha	N of Items
.841	6

6. Professional Development

A3-11: Component Matrix

	Component 1
B6PD1	.788
B6PD4	.783
B6PD3	.755
B6PD2	.702

A3-12: Reliability Statistics

Cronbach's Alpha	N of Items
.751	4

APPENDIX D: INTRA-CLASS CORRELATION COEFFICIENTS (ICCS) FOR TEACHERS' WORKING CONDITIONS

Model

Level-1 Model

$$Y = B0 + R$$

Level-2 Model

$$B0 = G00 + U0$$

Table A4: Intra-class Correlation Coefficients

	ICC	$Sigma^2$	Tau	Total Variance
Use of Time	0.20	0.55	0.12	0.63
Facilities and Resources	0.32	0.35	0.15	0.50
Empowerment	0.49	0.46	0.44	0.90
Leadership	0.54	0.41	0.45	0.84
Collegial Support	0.39	0.29	0.17	0.47
Professional Development	0.21	0.53	0.13	0.63

APPENDIX E: MISSING DATA ANALYSIS FOR TEACHER SURVEY

1. Relatively more teachers at losing schools than those at gaining schools were in the missing group whose members did not respond the most of last part of the survey (see Tables A5-1 and A5-2).

Table A5-1: Missing Group

		School Level			Total
		Elementary	Middle	High	
Gaining	1 Gaining	5	6	4	15
	2 Losing	13	8	6	27
Total		18	14	10	42

Table A5-2: Total Sample

		School Level			Total
		Elementary	Middle	High	
Gaining	1 Gaining	42	47	59	148
	2 Losing	93	51	37	181
Total		135	98	96	329

Note: Three teachers are missing because they did not provide school information.

2. The differences between the missing group and total sample seemed to be little. There were almost no differences between the two groups with respect to their perceptions of teachers' working conditions which were located in the first part of the surveys (see Tables A5-3 and A5-4). In addition, little differences were found between two groups regarding the impact of student enrollment increase/decrease on teachers' job security, benefits, and salary which were located in the last part of the survey (see Tables A5-5 and A5-6).

Table A5-3: Teachers' Perceptions of Teacher Working Conditions in the Missing Group

					95% C.I.	
		N	Mean	S.D.	S.E.	Lower	Upper
B1TimeUse the use of time in your school	1 Gaining	13	2.85	0.78	0.22	2.38	3.31
	2 Losing	18	2.74	0.73	0.17	2.38	3.11
	Total	31	2.79	0.74	0.13	2.52	3.06
B2SchFacility your school facilities and resources	1 Gaining	14	4.33	0.55	0.15	4.02	4.65
	2 Losing	18	3.35	0.67	0.16	3.02	3.68
	Total	32	3.78	0.78	0.14	3.50	4.06
B3Empower empowerment in your school	1 Gaining	13	3.91	0.71	0.20	3.48	4.34
	2 Losing	19	2.72	0.89	0.20	2.29	3.14
	Total	32	3.20	1.00	0.18	2.84	3.56
B4Leadership leadership in your school	1 Gaining	14	3.79	0.61	0.16	3.43	4.14
	2 Losing	18	2.84	1.07	0.25	2.31	3.37
	Total	32	3.25	1.01	0.18	2.89	3.62
B5ColleSupport collegial support in your school	1 Gaining	14	4.01	0.44	0.12	3.76	4.26
	2 Losing	16	3.49	0.84	0.21	3.04	3.94
	Total	30	3.73	0.72	0.13	3.46	4.00
B6PD professional development in your school	1 Gaining	13	3.25	0.82	0.23	2.76	3.74
	2 Losing	16	2.92	0.76	0.19	2.52	3.33
	Total	29	3.07	0.79	0.15	2.77	3.37

Table A5-4. Teachers' Perceptions of Teacher Working Conditions in the Total Sample

					95% C.I.	
		N	Mean	S.D.	S.E.	Lower	Upper
B1TimeUse the use of time in your school	1 Gaining	145	2.98	0.79	0.07	2.85	3.11
	2 Losing	169	2.78	0.79	0.06	2.66	2.90
	Total	314	2.87	0.79	0.04	2.79	2.96
B2SchFacility your school facilities and resources	1 Gaining	146	4.28	0.60	0.05	4.18	4.37
	2 Losing	170	3.62	0.69	0.05	3.52	3.73
	Total	316	3.93	0.73	0.04	3.84	4.01
B3Empower empowerment in your school	1 Gaining	143	3.82	0.84	0.07	3.68	3.96
	2 Losing	171	3.03	0.97	0.07	2.89	3.18
	Total	314	3.39	0.99	0.06	3.28	3.50
B4Leadership leadership in your school	1 Gaining	146	3.77	0.82	0.07	3.64	3.91
	2 Losing	166	3.04	0.91	0.07	2.90	3.18
	Total	312	3.38	0.95	0.05	3.28	3.49
B5ColleSupport collegial support in your school	1 Gaining	146	3.99	0.56	0.05	3.90	4.08
	2 Losing	167	3.65	0.72	0.06	3.54	3.76
	Total	313	3.81	0.67	0.04	3.73	3.88
B6PD professional development in your school	1 Gaining	144	3.24	0.85	0.07	3.10	3.38
	2 Losing	169	3.08	0.73	0.06	2.97	3.19
	Total	313	3.15	0.79	0.04	3.07	3.24

Table A5-5: Impact of Student Enrollment Increase/decrease on Teachers' Job Security, Salary, and Benefits in the Missing Group

					95% C.I.	
		N	Mean	S.D.	S.E.	Lower	Upper
D5IMPofEnCHG1 Job security	1 Gaining	12	2.33	1.16	0.33	1.60	3.07
	2 Losing	13	2.15	1.41	0.39	1.30	3.00
	Total	25	2.24	1.27	0.25	1.72	2.76
D5IMPofEnCHG2 Salary	1 Gaining	12	1.67	0.99	0.28	1.04	2.29
	2 Losing	11	2.27	1.27	0.38	1.42	3.13
	Total	23	1.96	1.15	0.24	1.46	2.45
D5IMPofEnCHG3 Benefits	1 Gaining	12	1.75	0.97	0.28	1.14	2.36
	2 Losing	11	2.45	1.21	0.37	1.64	3.27
	Total	23	2.09	1.13	0.24	1.60	2.57

Table A5-6: Impact of Student Enrollment Increase/decrease on Teachers' Job Security, Salary, and Benefits in the Total Sample

					95% C.I.	
		N	Mean	S.D.	S.E.	Lower	Upper
D5IMPofEnCHG1 Job security	1 Gaining	137	1.72	0.98	0.08	1.56	1.89
	2 Losing	165	2.16	1.25	0.10	1.97	2.35
	Total	302	1.96	1.15	0.07	1.83	2.09
D5IMPofEnCHG2 Salary	1 Gaining	132	1.83	1.04	0.09	1.66	2.01
	2 Losing	160	2.36	1.29	0.10	2.16	2.56
	Total	292	2.12	1.21	0.07	1.98	2.26
D5IMPofEnCHG3 Benefits	1 Gaining	135	1.93	1.07	0.09	1.75	2.12
	2 Losing	160	2.40	1.25	0.10	2.21	2.59
	Total	295	2.19	1.19	0.07	2.05	2.32

APPENDIX F: IMPACT OF ENROLLMENT CHANGES ON TEACHERS' JOB SECURITY, SALARIES, AND BENEFITS BY SCHOOL

Table A6-1: Impact of Enrollment Changes on Teachers' Job Security by School

School ID	N	1 Not at all	2 Some extent	3 Moderate extent	4 Great extent
101	7	42.9%	42.9%	14.3%	.0%
102	6	66.7%	.0%	16.7%	16.7%
103	7	57.1%	42.9%	.0%	.0%
104	16	37.5%	25.0%	18.8%	18.8%
105	8	50.0%	.0%	25.0%	25.0%
106	12	41.7%	25.0%	33.3%	.0%
107	12	41.7%	50.0%	8.3%	.0%
108	24	70.8%	8.3%	16.7%	4.2%
111	9	66.7%	11.1%	11.1%	11.1%
112	8	50.0%	12.5%	.0%	37.5%
113	13	76.9%	23.1%	.0%	.0%
114	15	66.7%	26.7%	6.7%	.0%
120	5	40.0%	40.0%	.0%	20.0%
121	3	33.3%	66.7%	.0%	.0%
122	5	40.0%	40.0%	20.0%	.0%
123	3	100.0%	.0%	.0%	.0%
124	6	83.3%	16.7%	.0%	.0%
125	6	83.3%	.0%	16.7%	.0%
126	10	70.0%	.0%	20.0%	10.0%
127	11	81.8%	18.2%	.0%	.0%
128	13	84.6%	15.4%	.0%	.0%
129	7	57.1%	14.3%	.0%	28.6%
130	11	36.4%	27.3%	18.2%	18.2%
131	**13**	**61.5%**	**7.7%**	**7.7%**	**23.1%**
132	13	23.1%	46.2%	15.4%	15.4%
133	13	53.8%	23.1%	7.7%	15.4%
134	9	.0%	22.2%	11.1%	66.7%
135	9	11.1%	11.1%	11.1%	66.7%
136	16	12.5%	25.0%	.0%	62.5%
137	12	.0%	16.7%	16.7%	66.7%

Table A6-2: Impact of Enrollment Changes on Teachers' Salary by School

School ID	N	1 Not at all	2 Some extent	3 Moderate extent	4 Great extent
101	6	50.0%	16.7%	33.3%	.0%
102	6	50.0%	33.3%	.0%	16.7%
103	7	57.1%	14.3%	14.3%	14.3%
104	15	73.3%	20.0%	.0%	6.7%
105	8	75.0%	12.5%	12.5%	.0%
106	12	41.7%	25.0%	16.7%	16.7%
107	12	58.3%	25.0%	8.3%	8.3%
108	23	43.5%	34.8%	17.4%	4.3%
111	9	44.4%	22.2%	11.1%	22.2%
112	6	33.3%	33.3%	.0%	33.3%
113	13	46.2%	38.5%	7.7%	7.7%
114	15	46.7%	13.3%	20.0%	20.0%
120	4	50.0%	25.0%	25.0%	.0%
121	2	50.0%	50.0%	.0%	.0%
122	4	50.0%	25.0%	.0%	25.0%
123	3	100.0%	.0%	.0%	.0%
124	6	50.0%	50.0%	.0%	.0%
125	6	100.0%	.0%	.0%	.0%
126	10	70.0%	.0%	20.0%	10.0%
127	11	72.7%	18.2%	9.1%	.0%
128	13	53.8%	30.8%	7.7%	7.7%
129	7	28.6%	28.6%	.0%	42.9%
130	11	36.4%	18.2%	9.1%	36.4%
131	13	38.5%	23.1%	15.4%	23.1%
132	13	30.8%	15.4%	23.1%	30.8%
133	13	46.2%	30.8%	.0%	23.1%
134	8	25.0%	.0%	12.5%	62.5%
135	8	.0%	25.0%	.0%	75.0%
136	16	.0%	6.3%	18.8%	75.0%
137	12	.0%	8.3%	25.0%	66.7%

Table A6-3: Impact of Enrollment Changes on Teachers' Benefits by School

School ID	N	1 Not at all	2 Some extent	3 Moderate extent	4 Great extent
101	6	50.0%	16.7%	33.3%	.0%
102	6	50.0%	16.7%	16.7%	16.7%
103	7	42.9%	28.6%	14.3%	14.3%
104	16	75.0%	12.5%	.0%	12.5%
105	8	62.5%	25.0%	12.5%	.0%
106	12	33.3%	33.3%	25.0%	8.3%
107	12	41.7%	25.0%	16.7%	16.7%
108	24	29.2%	37.5%	25.0%	8.3%
111	10	60.0%	10.0%	10.0%	20.0%
112	6	33.3%	33.3%	.0%	33.3%
113	13	53.8%	30.8%	7.7%	7.7%
114	15	46.7%	20.0%	6.7%	26.7%
120	4	50.0%	.0%	25.0%	25.0%
121	2	50.0%	50.0%	.0%	.0%
122	4	25.0%	50.0%	.0%	25.0%
123	3	66.7%	33.3%	.0%	.0%
124	6	50.0%	50.0%	.0%	.0%
125	6	100.0%	.0%	.0%	.0%
126	10	60.0%	10.0%	30.0%	.0%
127	11	72.7%	18.2%	9.1%	.0%
128	13	38.5%	38.5%	15.4%	7.7%
129	7	42.9%	28.6%	.0%	28.6%
130	11	27.3%	18.2%	36.4%	18.2%
131	13	38.5%	23.1%	7.7%	30.8%
132	13	30.8%	15.4%	30.8%	23.1%
133	13	38.5%	46.2%	.0%	15.4%
134	8	12.5%	12.5%	12.5%	62.5%
135	8	12.5%	.0%	12.5%	75.0%
136	16	.0%	.0%	18.8%	81.3%
137	12	.0%	8.3%	25.0%	66.7%

APPENDIX G: EDUCATORS' PERCEPTION OF CHOICE STUDENTS

Table A7-1: Teachers' Perceptions of Choice Students

	Strongly disagree	Disagree	Agree	Strongly agree	Not sure	Missing	Total
Choice students are highly motivated.	5.7%	34.3%	19.3%	2.4%	32.2%	6.0%	100.0 %
Choice students are high achievers.	6.0%	43.1%	12.3%	2.4%	30.4%	5.7%	100.0 %
Choice students come from higher socio-economic backgrounds.	12.3%	44.3%	9.3%	3.0%	25.9%	5.1%	100.0 %
There are no differences between choice students and non-choice students.	4.8%	24.1%	39.8%	6.9%	19.3%	5.1%	100.0 %
I try to identify the choice students who are in my classes.	48.8%	32.5%	3.6%	1.8%	7.5%	5.7%	100.0 %

Note. N=322

Table A7-2: Administrators' Perceptions of Choice Students

	Strongly disagree	Disagree	Agree	Strongly agree	Not sure	Missing	Total
Choice students are highly motivated.	0%	40.6%	28.1%	6.3%	21.9%	3.1%	100.0 %
Choice students are high achievers.	0%	46.9%	21.9%	6.3%	21.9%	3.1%	100.0 %
Choice students come from higher socio-economic backgrounds.	21.9%	53.1%	15.6%	.0%	6.3%	3.1%	100.0 %
There are no differences between choice students and non-choice students.	12.5%	28.1%	50.0%	6.3%	3.1%	0%	100.0 %
I try to identify the choice students who are in my classes.	40.6%	25.0%	28.1%	3.1%	3.1%	0%	100.0 %

Note. N=32

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