The Effect of Student Mobility on Academic Achievement

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The Effect of Student Mobility on Academic Achievement

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ABSTRACT

The author set out to determine if student mobility had an impact on student academic achievement. The author's classroom experienced a high number of mobile students the previous school year. In the 2009-2010 school year, 7% of the students withdrew from the author's classroom and an additional twelve students enrolled throughout various times of the school year. The author examined literature and previous studies on student mobility and its impact on academic achievement. The literature suggested that there was a correlation between the two variables. The author used data from the annual state assessment of all seventh grade students in the author's school to determine if mobility had an effect on the students' test scores.

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CHAPTER 1

Introduction

Background for the Project

In the era of high-stakes testing, every aspect of how schools operated and educated children had been put under a microscope. Schools were trying to raise test scores using a variety of curriculum, teaching strategies, and programs. Unfortunately, many schools were still falling short of making Adequate Yearly Progress (AYP), unable to improve because of an ever-increasing and unrealistic goal to get out of improvement status, or being on the verge of shutting down due to lack of improvement.

Many schools were dealing with demographics that were out of their control. In southeastern Washington State, the region had seen a significant increase in population over the last ten years. Along with the dramatic population increase, school districts were faced with the issue of student mobility.

The author believed student mobility affected schools in a variety of ways, particularly in classrooms where teachers were given the task to educate every student no matter where they were in their academic journey, and for all of their students to be at grade level by the end of the year. The author believed mobile students did not have the same academic opportunities as their new set of peers due to differing curriculum and pacing. This created substantial concern for the classroom teacher, leading the teacher to get the students caught up and, at the same time, move them along with the rest of the class. The author was convinced

that constant student mobility had a detrimental effect on student achievement and the ability of the school to raise test scores and meet rigorous state and national standards.

Statement of the Problem

Student mobility was a concern to educators. Some studies showed that students who were more mobile than their peers had lower test scores and had a higher likelihood of at-risk behavior. Certain literature suggested that interventions were needed to help these students catch up and help them assimilate into their new schools. By being proactive in this demographic, schools and educators could increase student achievement and test scores.

Purpose of the Project

The purpose of the project was to gain insight into the causes and effects of student mobility on student learning. The author worked in a community and school district that served a high migrant population. The author intended to use the literature and data collection to gain knowledge of this demographic and begin the process of helping these students be more academically successful in school.

Delimitations

The study took place during the 2010-2011 school year in a largely agricultural community in southeastern Washington. During the 2010-2011 school year, the middle school in which the study took place did not make Adequate Yearly Progress, and was in step three of school improvement. The middle school had 1,412 students attending the school and the ethnic breakdown of the student

population was: 49.1% Caucasian, 43% Hispanic, 2.4% Black, 2.9% Asian/Pacific Islander, 0.3% Pacific Islander, 2.7% Asian, and 0.7% Native American. In the middle school 48.9% of students were on free and reduced lunch, 10.6% of students were in Special Education, 9.1% of students were transitional bilingual, and 2.9% of students were migrant. There were 89 certificated classroom teachers with an average of 10.5 years experience teaching and of the 89 teachers 59.6% had a masters degree or higher. Of all the teachers at the middle school, 100 percent met No Child Left Behind highly-qualified standards (Report Card, 2010).

Assumptions

The student mobility rate of the author's school was significantly higher than that of other middle schools in the area that were similar to the demographic make-up of the author's school. The author also had a significant turnover rate in the author's classroom. Student mobility may have had little or no effect on the students' ability or their performance on the end of the year state assessment. However, the author had an increase of students meeting standard on the state assessment. The author used state assessment data for the entire seventh grade rather than the author's four classes.

Hypothesis

Student mobility negatively affected academic achievement as measured by the Measurement of Student Progress (MSP) test in mathematics.

Null Hypothesis

Student mobility did not negatively affect academic achievement as measured by the Measurement of Student Progress (MSP) test in mathematics.

Significance of the Project

The author reviewed literature and studies that addressed the effects of mobility on student achievement and researched the topic in the author's school. Results would help determine how teachers could better service these students to integrate them into local schools and help them achieve academic progress. As of May 2010, nearly 9% of all district students, ranging from kindergarten through twelfth grade, were migrant. Programs were designed throughout the district to assist classroom teachers, counselors, home visitors, and administrators understand the dynamics of this demographic and increase student achievement. New programs could be a model for other local school districts.

Procedure

The author intended to review literature that gave background information to the issue of mobility and its effects on student achievement. The author gathered data from the Measurements of Student Progress (MSP) to compare the two student groups; students who had been in the author's school since the beginning of their sixth grade and those students who enrolled in the author's school during their seventh grade year. The author organized the data into a spreadsheet. The students' data were separated based on the two criterions; those who were continuously enrolled since the beginning of their sixth grade year and those

students who enrolled in the author's school during their seventh grade year. The author analyzed the data to see if mobility had an effect on academic achievement based on students' math MSP scores. The author placed the results from the spreadsheet onto a graph to compare the averages of the two student groups. From this comparison, conclusions were drawn and discussed.

Definition of Terms

Adequate Yearly Progress. Adequate Yearly Progress was a measurement defined by the United States federal No Child Left Behind Act that allowed the U.S. Department of Education to determine how every public school and school district in the country were performing academically according to results on standardized tests.

Measurements of Student Progress. The Measurements of Student Progress was the yearly assessment given to students in the state of Washington. This test was an instrument to assess student and school progress towards AYP.

No Child Left Behind. No Child Left Behind was federal legislation that put into action the theories of standards-based education reform. The legislation was based on the belief that setting high standards and establishing measurable goals improved individual outcomes in education.

student mobility. Student mobility was defined as students moving from one school to another for reasons other than being promoted to the next grade level.

Acronyms

AYP. Adequate Yearly Progress.

GAO. General Accounting Office.

MSP. Measurements of Student Progress.

NCLB. No Child Left Behind.

OSPI. Office of Superintendent of Public Instruction.

CHAPTER 2

Review of Selected Literature

Introduction

The author primarily researched studies that involved middle school students who had higher rates of mobility. The author wanted to determine if students who were more mobile were more likely to perform lower on tests and were below grade level than students who were enrolled in school continuously. The author focused the research on the frequency of student mobility, indicators and predictors of student mobility, and programs for mobile students. The focus of the research was determine if previous studies found conclusive evidence that student mobility had an impact on academic achievement.

Frequency of Mobility

The first study in this research comes from Evans (1996), The Effect of Student Mobility on Academic Achievement. The study's findings concluded that the students who remained at the school from first to sixth grade did not obtain significantly higher reading and math achievement scores than sixth grade students who had transferred one or more times since the first grade. Evans continued to state that analysis did show slight gains for students who had attended the school three to six years versus one to two years (Evans, 1996). Evans explored research that had been conducted on the subject of mobility and student achievement showing that there was a negative impact on student success. Evans based the hypothesis on the review of literature. The data supported a null

hypothesis. Evans conducted research on thirty students that were classified as mobile or stable and randomly selected from a population of 110 sixth graders. The sample size for this study was small in comparison with several of the studies cited (Evans, 1996). Evans also concluded further refinement of the study to investigate student mobility and the effects of it on different age groups, students of different sex, different family structures, and different ethnic backgrounds. Evans (1996) recommended students who moved be allowed to continue to attend their original school if reasonable, implementing orientation programs for transfer students, and mainstream portfolios of classwork that transferring students could take with them to a new school.

Many Indicators of Mobility

The second study, Student Mobility and Demographics: Relationships to Aptitude and Achievement in a Three-Year Middle School, authored by Bolinger and Gilmore (1997), examined differences between stable and mobile students attending a three-year middle school in Terre Haute, Indiana. The sample included variables in gender, ethnicity, and family income. This sample was larger than the first study of the author's research and seemed to be more diverse. The measurement tool they used for their data analysis was Indiana Statewide Testing for Educational Progress (ISTEP). This test was being utilized as an indication of student achievement and progress. Many indicators of poor student performance had been correlated with standardized test performance. The researchers used this test with the sample to determine if different demographics

along with student mobility had a negative impact on test scores. Their results produced six null hypotheses that there was no relationship between student achievement and mobility. Though the data in this study did not indicate significant relationships between mobility and academic performance, similar studies had shown a strong relationship (Bolinger and Gilmore, 1997). Bolinger and Gilmore (1997) recommended using larger, more heterogeneous sample sizes and using multiple sites. They recommended that a comparative base of statewide scores from urban, suburban, and rural schools could reveal a more evident relationship between mobility and performance.

Predictors of Mobility

The author's next research piece was a study on The Effects of School Mobility on Scholastic Achievement. This Mehana and Reynolds (1995) study investigated the predictors of school mobility and the influence of mobility on grade six math and reading achievement. This was a large study that included a sample of 988 students who were of low-economic status. Mehana and Reynolds discussed the predictors of mobility such as free-lunch eligibility, low-economic status, and race. The study addressed three questions:

> (1) What was the frequency of school mobility from kindergarten through fifth grade among low-income children? (2) What were the predictors of school mobility? (3) Is school mobility associated with children's achievement in grade six above and beyond family and child background factors? (p. 15)

Previous studies had indicated that mobile students were prone to developmental problems such as low academic achievement. Mobile students were also found to have behavioral problems, to be retained in school, and to be suspended and/or expelled. The authors also discussed previous studies on the relationship between mobility and school competence that resulted in inconsistent findings. In their discussion at the end of the study they suggested that mobility predicted grade six reading and math achievement and frequent mobility predicted a three-month decline in reading scores. The study also found correlation between predictors of low-income and minority families and poverty levels increasing among minority preschool children. Frequent school mobility was likely to increase, which may have further exacerbated difficulties in achievement.

Programs for Mobile Students

The last piece of research was a 1994 report from the United States General Accounting Office (GAO). The report, Elementary School Children: Many Change Schools Frequently Harming Their Education, examined the characteristics of children in the United States who changed schools frequently, their success in school relative to children who had never changed schools, and the help that federal educational programs and policies could provide. Most of the authors' research used the data from this report to substantiate their findings and hypotheses. The report stated that over a half million third graders in the United States had changed schools frequently, attended at least three different schools since the beginning of first grade, and that the United States had one of

the highest mobility rates of all developed countries (Elementary School Children, 1994). Mobility had a negative impact on the consistency of a child's education and may have contributed to difficulties in catching up by the end of a school year. The GAO indicated that children from low-income families or who attended inner city schools were more likely than others to have changed schools frequently, thus giving validity to the Mehana and Reynolds (1995) study that stated one of the predictors of mobility was low-income (free lunch eligibility). The report was extensive in detailing migrant children, second language learners, all socio-economic statuses, and Title 1 students. The report concluded that there must be federal policies in place to assist highly mobile students and assist schools in meeting the needs of those students. Another recommendation was to propose a student record system to track students.

Summary

The literature pointed out that there were many indicators and predictors for student mobility and how it affected academic achievement. The research in this literature review had a common theme: students, who had a high rate of mobility, particularly in the middle levels, were below grade level and were not keeping pace with their more stable peers. The effect of mobility could have harmed students' chances of academic achievement. A common thread, however, in all of the research was the 1994 study done by the General Accounting Office. The studies found inconclusive evidence between mobility and student achievement, and all of the studies supported the null hypotheses. The research added

relevance to the author's research concern which was to determine if student mobility had an effect on academic achievement.

CHAPTER 3

Methodology and Treatment of Data

Introduction

Studies had shown inconclusive evidence between student mobility and the students' ability to maintain academic achievement when they were compared to their peers who had been continuously enrolled in the same school. The author studied whether previous research held true or contradicted the author's school, and if mobility was an indicator of academic achievement. The author gathered MSP math results from 398 seventh graders who took the test in May of 2010. The author analyzed the data to see if there was any or no relationship between student mobility and academic achievement as indicated of the students' math MSP results.

Methodology

The method in which the research was analyzed was a quantitative approach. According to *Educational Research: Competencies for Analysis and Applications*, by Gay, Mills, and Airasain (2009), the quantitative approach was defined as, "the collection of numerical data to explain, predict, and/or control phenomenon of interest" (p. 605). The author collected and analyzed MSP data of all seventh grade students who took the math MSP in May of 2010 at a middle school in southeastern Washington State.

Participants

The participants in the research were 398 seventh grade students who took the math portion of the MSP at a middle school in southeastern Washington State during the first week of May 2010. Of the 398 students who had taken the test, 39 of them enrolled during their sixth or seventh grade year in the author's school.

Instruments

The Measures of Student Progress (MSP) was given to Washington state students in May. The MSP determined if students met yearly progress in math, science, reading, and writing. The test, depending on the grade level of each student, was administered during several days. The students in this study were assessed in math, reading, and writing. The author used students' math MSP scores to determine if student mobility affected academic achievement as indicated on the MSP. MSP assessment data was used for the quantitative research. The data of student assessment scores on the MSP was formatted on Microsoft Excel and analyzed.

Design

The author decided to use the casual-comparative research design for the study. According to *Educational Research: Competencies for Analysis and Applications,* by Gay, Mills, and Airasain (2009), casual-comparative research was "research that attempts to determine the cause, or reason, for existing differences in the behavior or status of groups or individuals" (p. 600). In this study, the author

studied an established group that was different on some variable. The variable was the students' length of continuity of enrollment in the author's school. The author used data from the math MSP which gauged academic aptitude in the spring of each school year. The author collected the math MSP data from the school's testing coordinator. The data included the 398 seventh grade students who took the math MSP. The author also obtained a list of students who had transferred to the school during the students' sixth or seventh grade year from the school's registrar.

Procedure

The author collected the math MSP data from the school's testing coordinator. The data included the 398 seventh grade students who took the math MSP the previous year. The author also obtained a list of students who had transferred to the school during the students' sixth or seventh grade year from the school's registrar. The author cross-referenced the students on the registrar's list to the list of MSP results. The author separated the scores of the students who had not been continuously enrolled at the author's school and those students who had been enrolled continuously since the beginning of their sixth grade year and placed their results onto separate spreadsheets. The author calculated the averages of both groups to determine if the non-continuously enrolled students had a significantly different test average.

Treatment of the Data

The author used Microsoft Excel to organize and analyze the assessment data from the 398 seventh grade students' math MSP test results. The author calculated the averages of both groups of students' math MSP results. The results were displayed in two separate data displays using Microsoft Excel. A bar graph was used to display the difference of test score averages for the two groups. A scatterplot was used to display the groups' individual scores. From these comparisons, conclusions were drawn and discussed.

Summary

The author used quantitative data to find a correlation between the test scores of students who entered the author's school in the student's sixth or seventh grade year and students who had been continuously enrolled since the beginning of the student's sixth grade year. The author used a casual-comparative research design for the study. The author organized spreadsheets for the assessment data and created data displays to compare test scores of students that had been continuously enrolled at the school and students who had enrolled in the author's school after the beginning of the sixth or seventh grade year.

Chapter 4

Analysis of the Data

Introduction

After the author had experienced a significant turnover of students in the author's own classroom, and drawing conclusions based on the students' academic achievement after enrolling in the author's school, further research was needed to determine if mobility had an effect on academic achievement. The author collected and analyzed data from all the 398 seventh graders who took the math MSP in May of 2010. The average of the data between the students who were continuously enrolled since the beginning of sixth grade and the students who had enrolled during their sixth and seventh grade year was to determine if mobility had an effect on the students' academic achievement based on meeting standard on the math MSP.

Description of the Environment

The study took place during the 2009-2011 school years in a largely agricultural community in southeastern Washington. During the 2010-2011 school year, the middle school in which the study took place did not make Adequate Yearly Progress, and was in step three of school improvement. The middle school had 1,412 students attending the school and the ethnic breakdown of the student population was: 49.1% Caucasian, 43% Hispanic, 2.4% Black, 2.9% Asian/Pacific Islander, 0.3% Pacific Islander, 2.7% Asian, and 0.7% Native American. In the middle school 48.9% of students were on free and reduced

lunch, 10.6% of students were in Special Education, 9.1% of students were transitional bilingual, and 2.9% of students were migrant. There were 89 certificated classroom teachers with an average of 10.5 years experience teaching and of the 89 teachers 59.6% had a masters degree or higher. Of all the teachers at the middle school, 100 percent met No Child Left Behind highly-qualified standards (Report Card, 2010). The students involved in the study were all seventh grade students who took the math MSP in May of 2010.

Hypothesis

Student mobility negatively affected academic achievement as measured by the Measurement of Student Progress (MSP) test in mathematics.

Null Hypothesis

Student mobility did not negatively affect academic achievement as measured by the Measurement of Student Progress (MSP) test in mathematics.

Results of the Study

The results of the data showed a 25.9 point difference in students' 2010 math MSP scores between the continuously enrolled students and those students who enrolled during their sixth and seventh grade years. The average score of the 359 students who had been enrolled since the beginning of the sixth grade year was 402.6. The average score of the 39 students who had enrolled during their sixth or seventh grade year was 376.7. The Office of Superintendent of Public Instruction deemed a score of 400 meeting grade level standard in the subject of mathematics. On average, students who had been continuously enrolled met

standard. Those students who had transferred in after the beginning of their sixth or seventh grade year did not meet standard. In addition, 54% of the 359 continuously enrolled students met standard on the math MSP compared to 28% of the 39 students who had not been in the author's school since the beginning of their sixth grade year. Furthermore, the scatterplot (Figure 1) showed the distribution of scores between the two student groups. The Office of Superintendent of Public Instruction divided the range of scores into four levels. Level 3 and 4 were meeting or exceeding standard (400 and above), Level 2 was below standard (374-399) and Level 1 was well-below standard. In the following data display, there was a wide gap between the two student groups for Level 2 and Level 3 scores. Students who had been continuously enrolled fell into Level 2 and Level 3 status more frequently than the other student group, suggesting students who had been continuously enrolled at the author's school were closer to meeting standard or had met standard on the math MSP. According to the bar graph (Figure 2), there was a significant difference between the two student groups. Based on the results of the math MSP data (a 25.9 point difference between the averages and the difference of one group meeting standard and the other not meeting standard), students who had transferred in after their sixth or seventh grade year did not reach the level of academic achievement as their peers who had been enrolled continuously since the beginning of their sixth grade year. The null hypothesis was rejected.

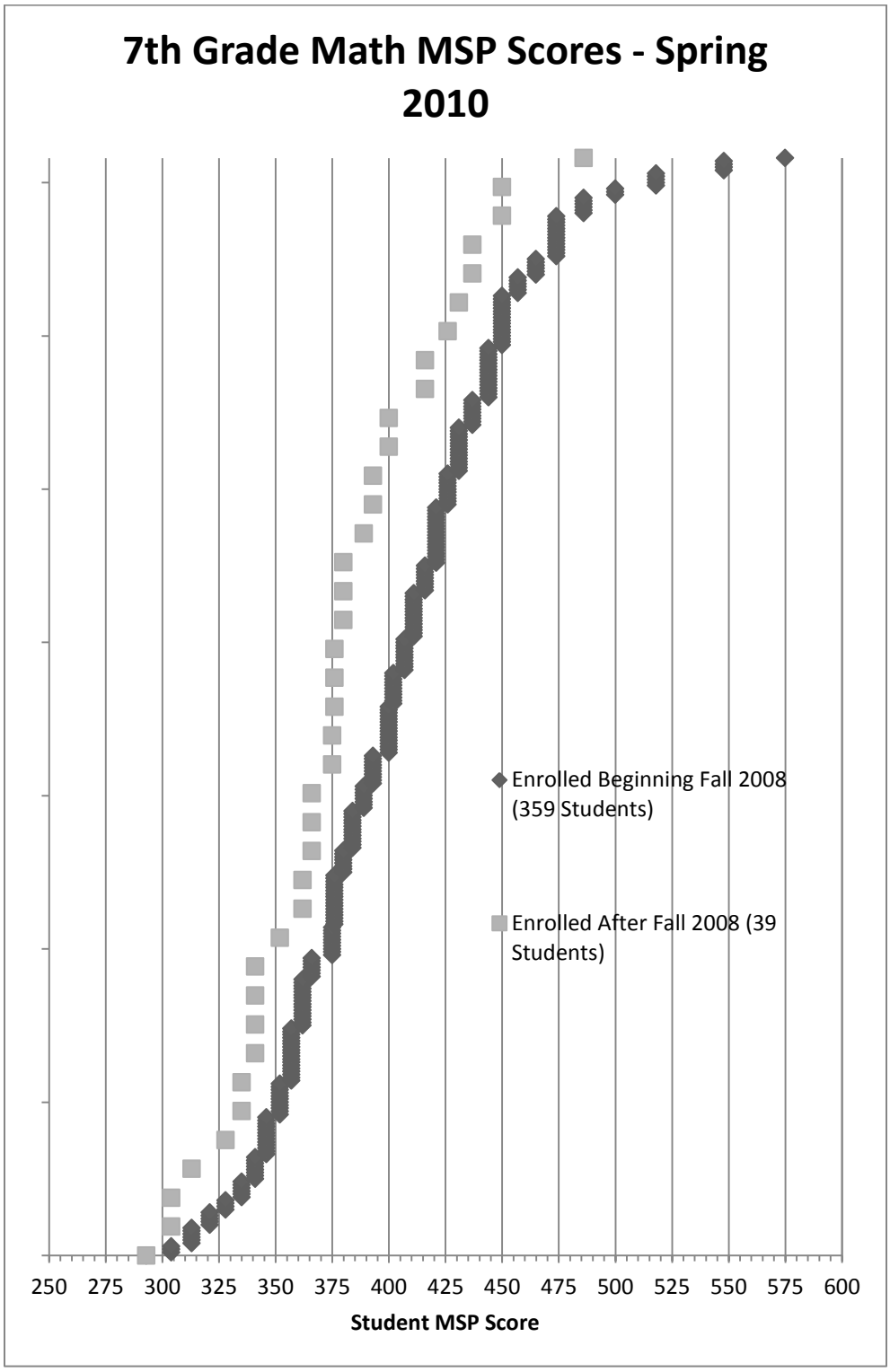

Figure 1. 7th Grade Math MSP Scores – Spring 2010

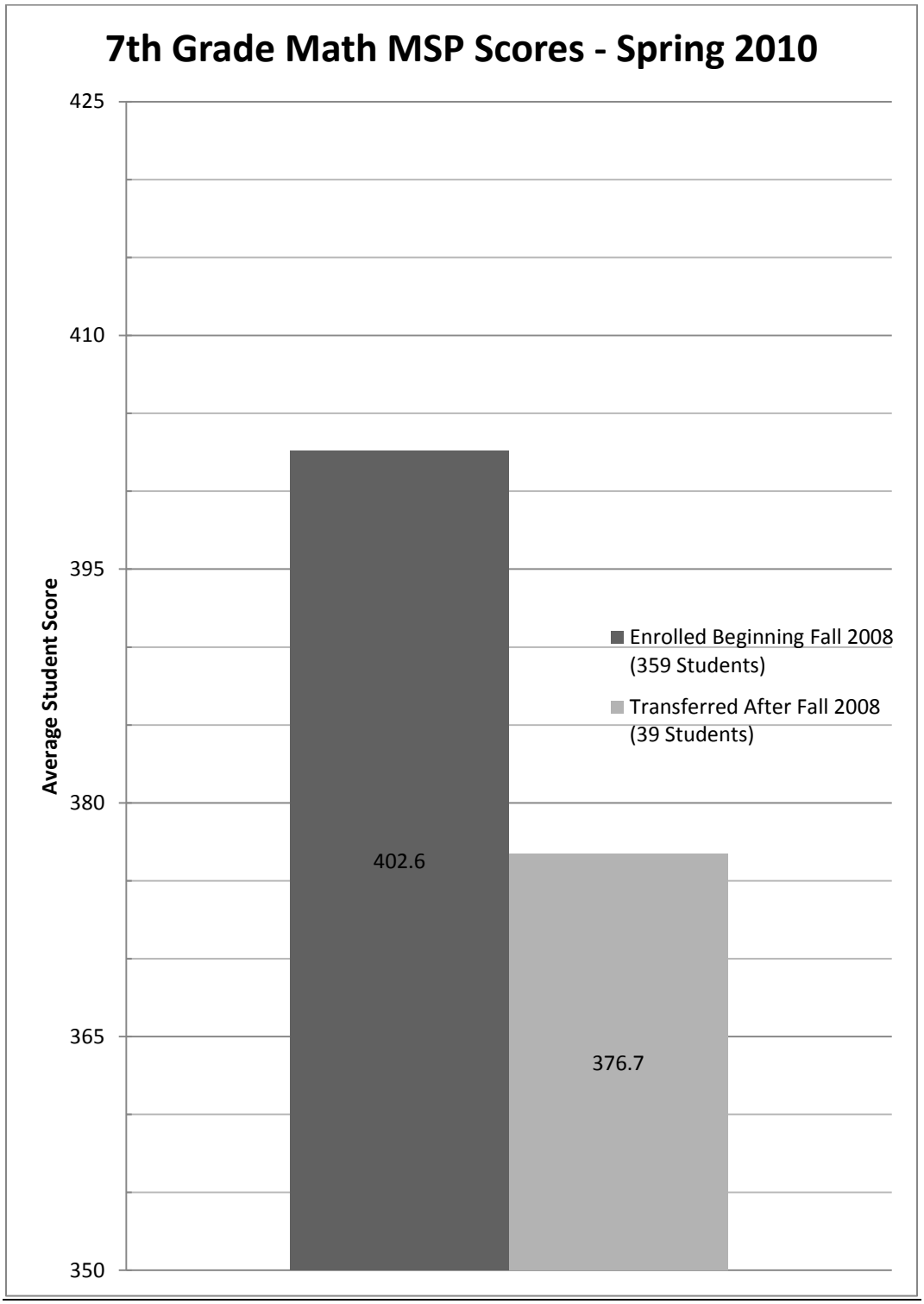

Figure 2. 7th Grade Math MSP Scores – Spring 2010

Findings

The data showed a 25.9 point difference in students' 2010 math MSP scores between the continuously enrolled students and those students who enrolled during their sixth and seventh grade years. The average score of the 359 students who had been enrolled since the beginning of the sixth grade year was 402.6. The average score of the 39 students who had enrolled during their sixth or seventh grade year was 376.7. After analyzing the data the author found that the group of students who enrolled during the sixth or seventh grade year in the author's school significantly scored lower than their peers. Only 28% of students who enrolled during their sixth or seventh grade year met standard on the MSP compared to 54% of the students who had been continuously enrolled since the beginning of their sixth grade year. The null hypothesis was rejected and the hypothesis was supported based on the author's findings.

Discussion

The author's study differed from the author's research of previous studies on the effect of student mobility on academic achievement. In previous studies and findings, the evidence was inconclusive. On the other hand, previous studies had a common theme: students who had a high rate of mobility, particularly in the middle levels, were below grade level and were not keeping pace with their more stable peers. The effect of mobility could have harmed students' chances of academic achievement. The author's study confirmed students in the middle

levels were below grade level and were not keeping pace with their more stable peers.

Summary

After the author had experienced a significant turnover of students in the author's own classroom, and drawing conclusions based on the students' academic achievement after enrolling in the author's school, further research was needed to determine if mobility had an effect on academic achievement. The author collected and analyzed data from all the 398 seventh graders who took the math MSP in May of 2010. The average of the data between the students who were continuously enrolled since the beginning of sixth grade and the students who had enrolled during their sixth and seventh grade year was to determine if mobility had an effect on the students' academic achievement based on meeting standard on the math MSP. The data showed a 25.9 point difference in students' 2010 math MSP scores between the continuously enrolled students and those students who enrolled during their sixth and seventh grade years. The average score of the 359 students who had been enrolled since the beginning of the sixth grade year was 402.6. The average score of the 39 students who had enrolled during their sixth or seventh grade year was 376.7. After analyzing the data the author found that the group of students who enrolled during the sixth or seventh grade year in the author's school significantly scored lower than their peers. Only 28% of students who enrolled during their sixth or seventh grade year met standard on the MSP compared to 54% of the students who had been continuously

enrolled since the beginning of their sixth grade year. The null hypothesis was rejected and the hypothesis was supported based on the author's findings.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

The author noticed a significant rate of mobility in the author's classroom the previous year. The author wanted to research the impact of student mobility and how it affected academic achievement. Research determined no conclusive evidence and no significant correlation between student mobility and academic achievement. The author collected data from the math state assessment of seventh grade students from the author's school to determine if there was a difference of scores between students who had been continuously enrolled since the beginning of their sixth grade year and students who had transferred to the author's school during their sixth or seventh grade year.

Summary

Throughout the author's teaching career, the author noticed the mobility rate of students at the author's school was at a significantly higher rate than of other middle schools in the same area. The author researched other studies concerning student mobility and the affect on academic achievement. The author set out to determine if there was a correlation between student mobility and academic achievement among the author's students in the author's school. The author hypothesized that student mobility negatively affected academic achievement as measured by the Measurement of Student Progress (MSP) test in mathematics. A review of literature was conducted in the areas of student mobility and the impact

on academic achievement in middle school students. The research in this literature review had a common theme: students who had a high rate of mobility, particularly in the middle levels, were below grade level and were not keeping pace with their more stable peers. The effect of mobility could have harmed students' chances of academic achievement. The author analyzed the data using a quantitative approach. The author collected data of the seventh grade students who took the math MSP in the spring of 2010 and compared the scores of the two student groups; students who had been continuously enrolled since the beginning of their sixth grade year and students who had transferred to the author's school during the students' sixth or seventh grade year. The author found a significant difference in scores between the two student groups and found that the students who had enrolled during their sixth or seventh grade year had an average score of 376.7 on the math MSP compared to the average score of 402.6 for the students who had been continuously enrolled in the author's school.

Conclusions

In chapter two the author researched student mobility and the possible effect on academic achievement. The research showed inconclusive evidence and that there was not a significant correlation between the two variables. All of the studies supported the author's null hypothesis. The results of the author's study, however, showed a 25.9 point difference in students' 2010 math MSP scores between the continuously enrolled students and those students who enrolled during their sixth and seventh grade years. The author concluded, based on the

results of the study, that student mobility negatively impacted student academic achievement. The null hypothesis was rejected and the hypothesis was supported.

Recommendations

Based on the author's conclusion that student mobility decreased academic achievement, the author recommends further research to be done on the effects of student mobility on academic achievement. The author recommends having a larger sample size to determine if this correlation exists for larger schools or an entire school district. The author also recommends delineating between certain sub-populations of students. Future studies could investigate student mobility and the effects it has on different age groups, students of different sex, different family structures, and different ethnic and socio-economic backgrounds.

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