Eye on Evaluation
WAKE COUNTY PUBLIC SCHOOL SYSTEM
EVALUATION AND RESEARCH DEPARTMENT

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MAGNET PROGRAM REVIEW

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ABSTRACT

This review evaluates the effectiveness of Wake County Public School System (WCPSS) magnet schools in meeting the objectives established by the Wake County Board of Education in April 2005. Data show that magnet schools positively contribute to the optimal utilization of school facilities in WCPSS. Many magnet schools and neighboring schools would experience under-utilization or unfavorable changes in the demographic composition of their student populations if they were demagnetized. Analysis also suggests that magnet schools effectively promote diverse student populations and reduce high concentrations of poverty by drawing students from more affluent families to their schools. Magnet schools tend to show similar achievement trends as non-magnet schools with similar student populations. Surveyed magnet school principals describe how the expanded educational opportunities offered at their magnet schools positively impact students' academic and personal growth. Finally, interviewed magnet program administrators concur that magnet programs provide education innovation as a means of attracting parents and students to under-utilized schools.

SUMMARY

In response to a request made by the Wake County Board of Education, the Evaluation and Research (E&R) Department collaborated with the Magnet Programs Office to review the Wake County Public School System (WCPSS) Magnet Programs. Magnet Program policy was evaluated by analyzing the effectiveness of magnet schools in meeting the objectives established by the Board of Education (BOE) in April 2005. These objectives were written as follows:

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Magnet programs will be used to create healthy schools throughout the WCPSS through:

- utilization of schools,
- use of choice to promote diverse student populations, reduce high concentrations of poverty, and increase student achievement,
- expanded educational opportunities, and
- promotion of program innovations that foster system-wide improvements.

E&R staff translated these objectives into research questions, which are addressed in this report using a mixed methods approach.

Question 1: Have magnet schools optimized the utilization of all school facilities?

Using 2006-07 data collected from the Office of Growth Management, Magnet Program staff analyzed the membership-capacity percentages of WCPSS schools. School capacity is measured as total campus capacity and includes additional classroom space provided by modular and mobile units. According to these data, most (77%) magnet schools are being used to capacity. Only two of the 21 magnet elementary schools and two of the five magnet high schools were below 100% capacity. Magnet middle schools were somewhat less likely to be highly utilized with four of the nine magnet middle schools under 100%. Extrapolations of the effects of demagnetization on 2007-08 capacity rates show that many magnet schools and neighboring schools would experience under-utilization or unfavorable changes in the demographic composition of their student populations if such a change occurred.

Question 2: To what degree is the use of choice a) promoting diverse student populations, b) reducing high concentrations of poverty, and c) increasing student achievement?

To examine the economic heterogeneity of student populations in WCPSS, Magnet Program staff analyzed the distribution of the free or reduced-price lunch (FRL) student population at magnet and non-magnet schools in 2006-07. The percentages of FRL students at WCPSS magnet schools were also compared for base students assigned to the school and magnet students attending the school voluntarily. The findings suggest that magnet schools have been an effective means of promoting diverse student populations and reducing high concentrations of poverty. At all magnet schools serving base and magnet students, the percentage of FRL base students was consistently higher than the percentage of FRL magnet students. Magnet schools also tended to have more moderate percentages of FRL student populations compared to non-magnet schools. The affluence of magnet students appears to ameliorate the economic composition of magnet schools. The extent to which these magnet students reduce the concentration of poverty at a school depends on the comparative proportion of base and magnet students at the school. It is likely, however, that the overall percentage of FRL students at magnet schools would noticeably increase if these schools were demagnetized.

E&R staff analyzed school-level achievement using Healthy Schools data to examine whether WCPSS magnet schools show similar achievement trends as non-magnet schools. Each magnet school was matched to a comparable non-magnet school by grade level (e.g., elementary magnet

schools were matched to elementary non-magnet schools and so forth), total student population, percentage of FRL student population, and when possible, district area. The findings show that magnet schools and non-magnet comparison schools are healthy schools. On average, magnet and non-magnet comparison schools had similar performance composites, growth composites, and AYP results, as well as school climate, school staffing, and student populations. When comparing individual pairs of magnet and non-magnet comparison schools, some differences were apparent between their academic and performance outcomes; however, these differences tended to decrease over time.

Question 3: Do magnet schools offer expanded educational opportunities?

E&R staff conducted an on-line survey of magnet school principals to gather information about the expanded educational opportunities offered at their schools. Of the 35 magnet school principals, 29 completed the survey, yielding a response rate of 83%. Principals described instructional opportunities and approaches uniquely implemented at their magnet schools such as the International Baccalaureate (IB) Programme, the Gifted and Talented (GT) program, use of popular literature to enhance learning, and project-based learning. Principals commonly cited elective offerings such as art, music, drama, foreign languages, and community service projects as additional educational and non-curricular opportunities offered at their schools. Approximately two thirds of magnet school principals were aware of instructional opportunities or approaches used at their schools that non-magnet schools had adopted. Principals said they believe that the expanded educational opportunities offered at their magnet schools greatly influence the academic and personal growth of their students, and in many cases, offer community benefits as well.

Question 4: Do magnet programs provide innovations that foster system-wide improvements?

To answer this question, E&R staff conducted interviews with three former and current magnet program administrators. The administrators concurred that magnet schools were originally and continue to be a system-wide initiative and that WCPSS magnet programs were designed to provide education innovation as a means of attracting parents and students to under-utilized schools. Interviewees also agreed that the purpose of magnet schools has shifted from racial integration to creating and maintaining healthy schools, in part through economic diversity. All administrators said they believe that WCPSS must safeguard the distinctive quality of magnet programs to ensure that they effectively meet their objectives. Magnet schools can and do serve as resources for systemic pedagogical and program innovations; and therefore, some practices may be shared with non-magnet schools. However, the core program components of magnet schools are important to protect. Without this protection, magnet schools would likely be less effective in attracting parents and students and many would face the possibility of under-utilization and educating more economically homogeneous student populations.

MAGNET PROGRAM REVIEW

INTRODUCTION

The decision to merge the Raleigh City and Wake County School Systems in July 1976 resulted from a number of educational, demographic, and political pressures. The migration patterns of Raleigh residents were one influential factor of this decision. At the time, it appeared that many middle-class White families were moving or settling further from downtown Raleigh into new suburbs that were being developed in the county. This emigration not only increased pressure on county schools that did not have the space to house all the new students, it also created an excess of space in some city schools to the extent that plans for closing were being considered. The fact that the proportion of the city schools' students who were African American was increasing suggested that issues of racial isolation would continue to intensify.

In 1982, the decision was made to address these interrelated problems by creating special academic programs in the city schools that were intended to draw students from the suburban schools. This solution could simultaneously reduce over-crowding in county schools while better utilizing school facilities in the city on a voluntary basis. At the same time, the racial isolation experienced by African American students in city schools would decline and enriched academic opportunities would be provided to students who chose to attend these schools. Over time, the Magnet Program has grown to include 35 elementary, middle, and high schools.

In this report, we examine the degree to which the policy solutions enacted by the Wake County Board of Education (BOE) in 1982 and maintained since then have, indeed, managed the issues that the policy was enacted to address (see Appendix A for an annotated listing of previous WCPSS Magnet Program reports). Specifically, we will examine data related to the degree to which school space is better utilized because of magnet schools. As such we pose the question "Is voluntary re-distribution of students relieving pressure on some over-crowded schools while increasing utilization of schools that would otherwise be under-subscribed?" Moreover, we will analyze the degree to which concentrations of students from poor families are reduced because of the magnet schools program. The research literature includes many studies on the correlation between poverty and low academic achievement. By reducing the concentration of poor students at some schools, the BOE hoped to reduce the academic problems that are often associated with poverty. Therefore, we also ask "Has the Magnet Program effectively reduced such concentrations of poverty?"

We will compare the academic achievement at magnet schools with the achievement of a group of similar schools that are not magnets. Improving academic achievement was not an articulated goal of the BOE when the Magnet Program was enacted in 1982. Nevertheless, examination of academic outcomes will ensure that no unintended consequence of the policy decision has been created. Finally, we will pose questions to magnet school principals and magnet program administrators to gather information about the expanded educational opportunities offered at magnet schools and to assess whether magnet programs provide innovations that foster system-wide improvements. Improving educational programs was one of the system needs the Magnet Program was originally designed to address. Providing innovations for system-wide improvements became a goal in 2005.

POLICY REVIEW

Question 1: Have magnet schools optimized the utilization of all school facilities?

Methodology

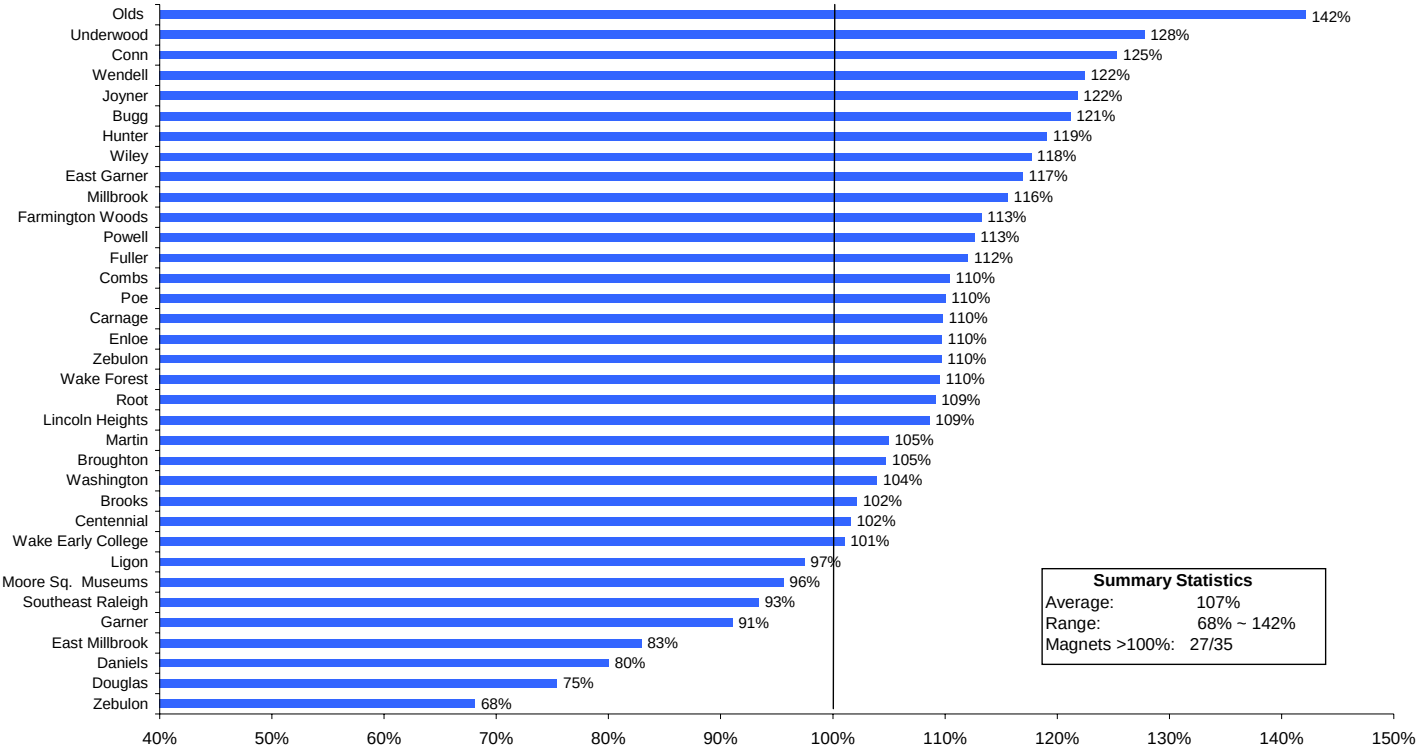
Using 2006-07 data collected from the Office of Growth Management, Magnet Program staff analyzed the membership-capacity percentages of WCPSS schools (see Appendix B for a list of magnet schools operating in 2005-06 and 2006-07). School capacity is measured as total campus capacity and includes additional classroom space provided by modular and mobile units. Mount Vernon Middle School and Longview and Phillips High Schools, which are special schools, are not included in this analysis.

Results

Figure 1 shows membership-capacity percentages at all WCPSS magnet schools in 2006-07. The findings show that in general, magnet school facilities are highly utilized.

- Twenty-seven (77%) of the 35 magnet schools were over 100% capacity.
- The average utilization percentage was 107%, and the range was 68% to 142%.
- Zebulon Elementary School, which is an equity magnet serving base students only, had the lowest utilization rate (68%), and Olds Elementary School had the highest rate (142%).

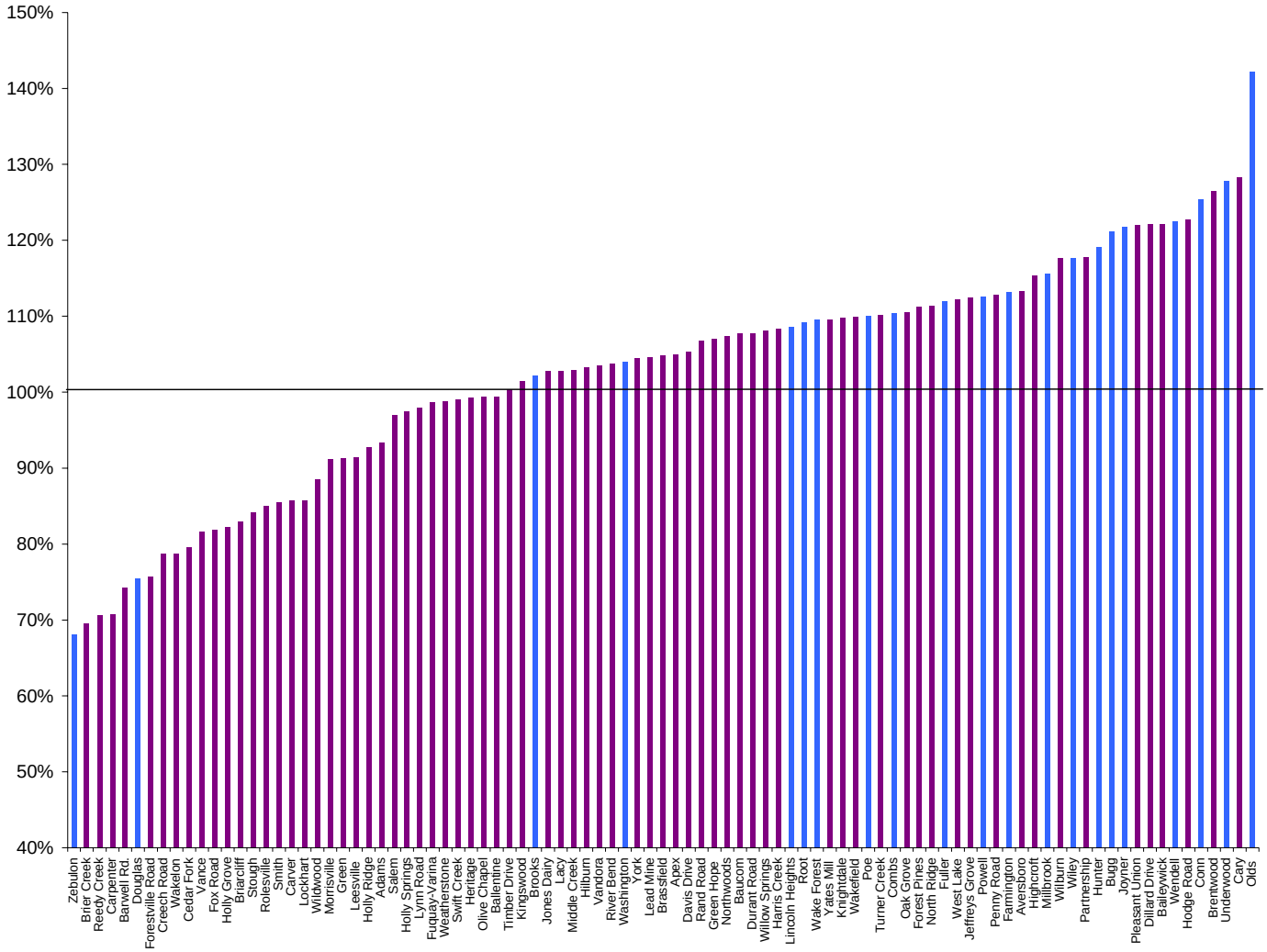
Figure 1
Membership-to-Capacity Percentages at WCPSS Magnet Schools, 2006-07



Membership-capacity percentages at all WCPSS elementary schools in 2006-07 are shown in Figure 2. Almost all magnet elementary schools, represented by the blue bars, are filled to capacity.

- The average utilization rate across the 93 elementary schools was 103%, and the range remained at 68% to 142%, with Zebulon and Olds Elementary magnet schools at the extreme ends of the distribution. The magnet schools average was slightly higher at 107%.
- Thirty-four elementary schools had utilization rates below 100%. Four of these schools had recently opened and were not expected to reach full utilization in 2006-07.
- The majority of magnets schools fell at the high end of the utilization distribution.
- Only two elementary magnet schools were below 100% capacity.

Figure 2
Membership-to-Capacity Percentages at WCPSS Elementary Schools, 2006-07

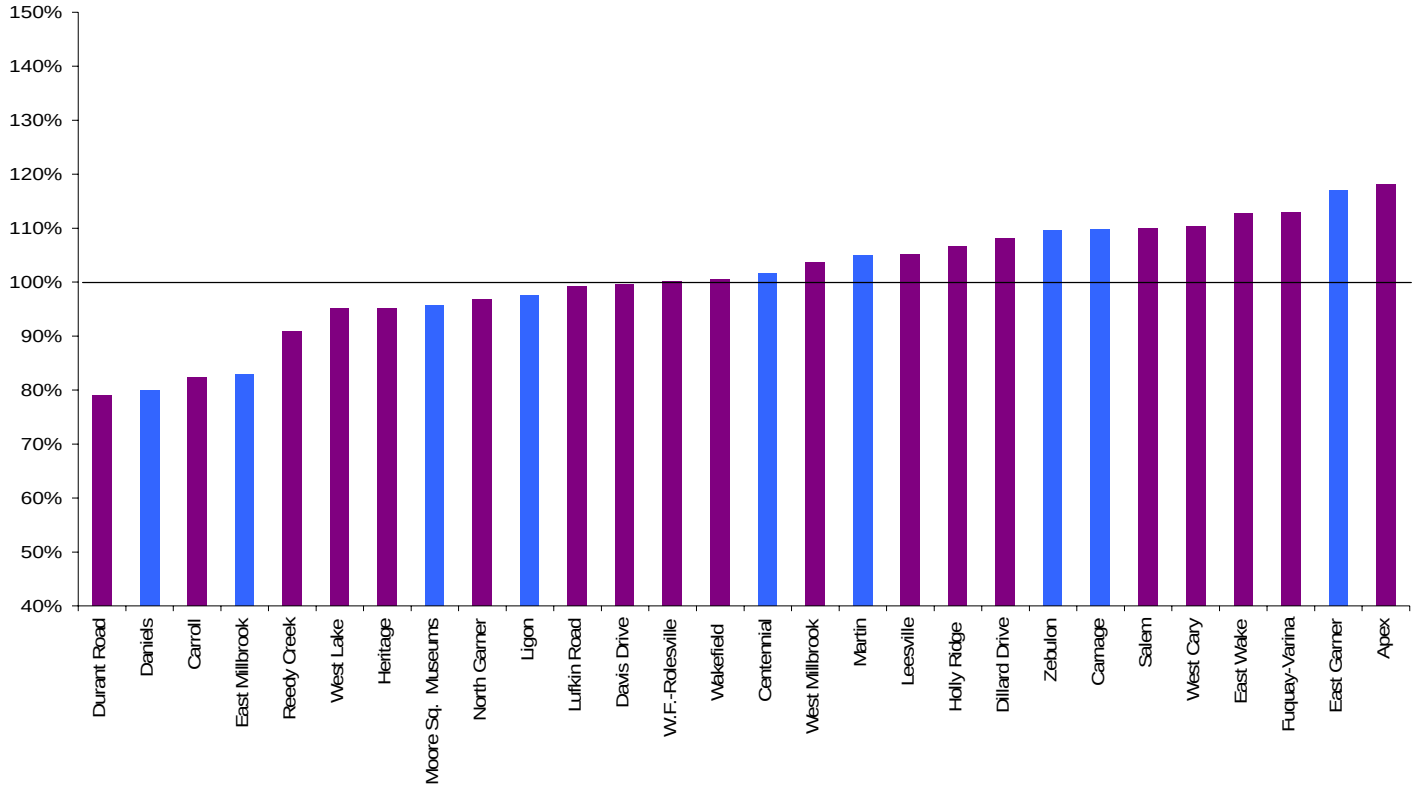


Note: Blue bars represent magnet schools.

Figure 3 indicates that there is less variation in membership-capacity percentages among WCPSS middle schools in 2006-07 than is seen among elementary schools. Slightly more than half of magnet middle school facilities are fully utilized.

- The average utilization rate for the 28 middle schools, as well as the nine magnet schools, was 101%.
- The range of utilization for all middle schools was 79% to 118%.
- Twelve middle schools, including four magnet schools, had utilization rates below 100%. However, two magnet schools, Moore Square and Ligon Middle Schools, were near 100% capacity.

Figure 3
Membership-to-Capacity Percentages at WCPSS Middle Schools, 2006-07

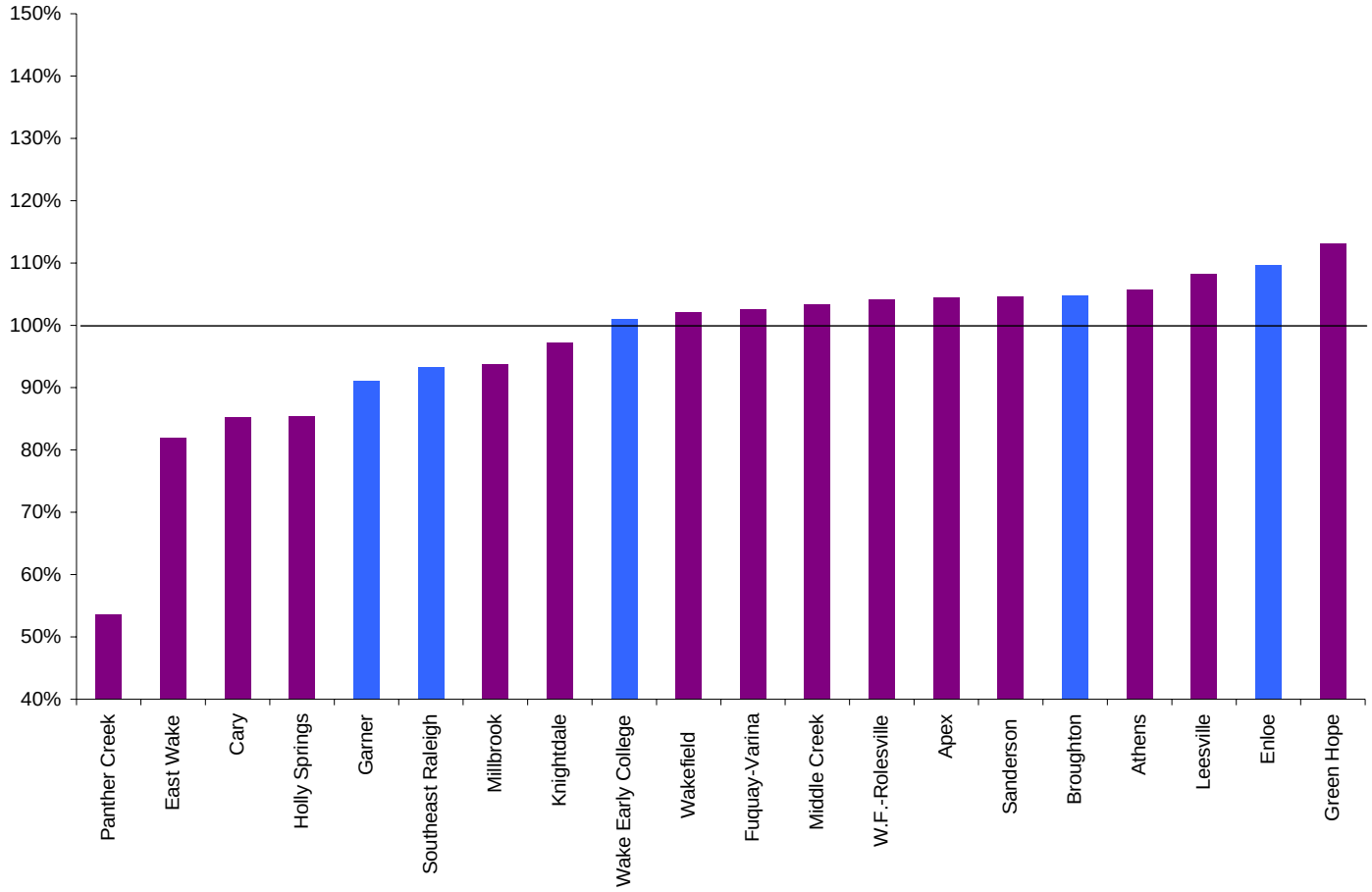


Note: Blue bars represent magnet schools.

Figure 4 shows membership-capacity percentages at WCPSS high schools in 2006-07. Overall, findings show solid membership-to-capacity rates at magnet high schools, as represented by the blue bars.

- The average utilization rate for the 20 high schools was 97%, and the range was 54% to 115%.
- Panther Creek High School opened in 2006-07 with grades 9 and 10 and will add a grade each of the next two school years. This accounts for its low membership-to-capacity rate.
- Eight high schools were not being used to full capacity, whereas 12 high schools were above 100% capacity.
- Among the five magnet high schools, three were above 100% (Enloe: 110%, Broughton: 105%, Wake Early College: 101%), and two were slightly below 100% (Southeast Raleigh: 93%, Garner: 91%).

Figure 4
Membership-to-Capacity Percentages at WCPSS High Schools, 2006-07



Note: Blue bars represent magnet schools.

Table 1 shows the results of an analysis conducted by the Office of Growth Management to predict whether magnet schools would be utilized to full capacity in 2007-08 if they were demagnetized.

- Eleven (31%) magnet schools would likely be utilized at full capacity if they were demagnetized.
- Demagnetization would likely have a negative impact on the use of facility space at 15 (43%) magnet schools.
- For the ten remaining magnet schools, the effect of demagnetization on the optimal utilization of school facilities is either unclear or could be accomplished, but not without negatively impacting the demographics of surrounding schools.

Table 1
Predicting Magnet School Utilization

Would the school facility be utilized to full capacity if demagnetized?	**Number**
Yes	11
No	15
?*	10

Note: ***** Indicates that answer is unclear or that such a change could be accomplished but might have a negative impact on demographics of neighboring schools.

School Utilization Summary

Data show that magnet schools positively contribute to the optimal utilization of all school facilities in WCPSS. Most (77%) of the 35 magnet schools were above 100% capacity in 2006-07. Only two of the 21 magnet elementary schools and two of the five magnet high schools were below 100% capacity. Magnet middle schools were somewhat less likely to be highly utilized with four of the nine magnet middle schools under 100%. More importantly, extrapolations of the effects of demagnetization on 2007-08 capacity rates show that many magnet schools and neighboring schools would experience under-utilization or unfavorable changes in the demographic composition of their student populations if such a change occurred. Magnet schools appear to greatly contribute to the effective use of facility space in WCPSS.

Question 2: To what degree is the use of choice a) promoting diverse student populations, b) reducing high concentrations of poverty, and c) increasing student achievement?

Methodology for Diverse Students and Lower Concentrations of Poverty Analyses

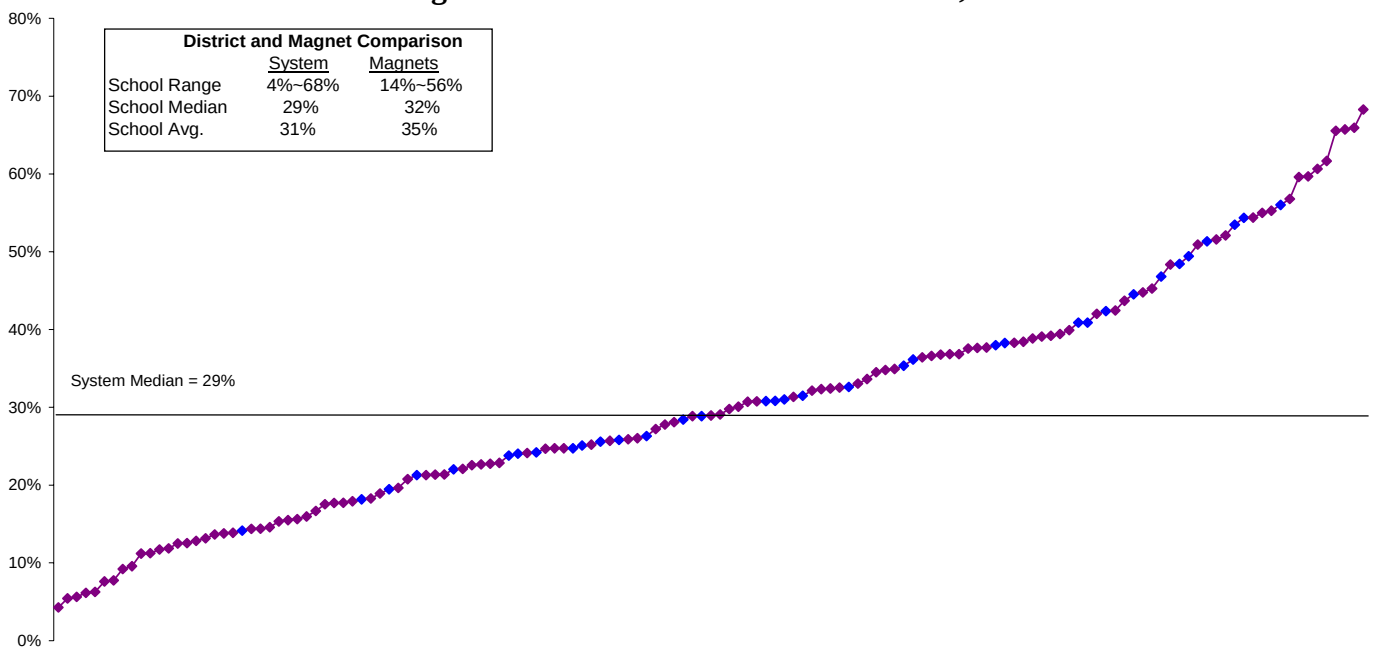
To examine the economic heterogeneity of student populations in WCPSS, Magnet Program staff analyzed the distribution of the free or reduced-price lunch (FRL) student population at magnet and non-magnet schools in 2006-07. The percentages of FRL students at WCPSS magnet schools were also compared between base students assigned to the school and magnet students attending the school voluntarily.

Results

Figure 5 shows the distribution of all WCPSS schools, including the School of Health and Science and School of Integrated Technology at East Wake High School, by the percentage of their FRL students. Considering the wide range in percentages of FRL students system-wide, schools appear to be disparate in terms of the diverse student populations they serve.

- The average percentage of FRL students among the 143 schools was 31%, and the median was 29%.
- The range among schools district-wide was quite broad (4% to 68%).
- Magnet schools, represented by the blue symbols, had a slightly higher average of percentage of FRL students (35%), but a much narrower range (14% to 56%) than the system overall.

Figure 5
Percentage of FRL Students at WCPSS Schools, 2006-07

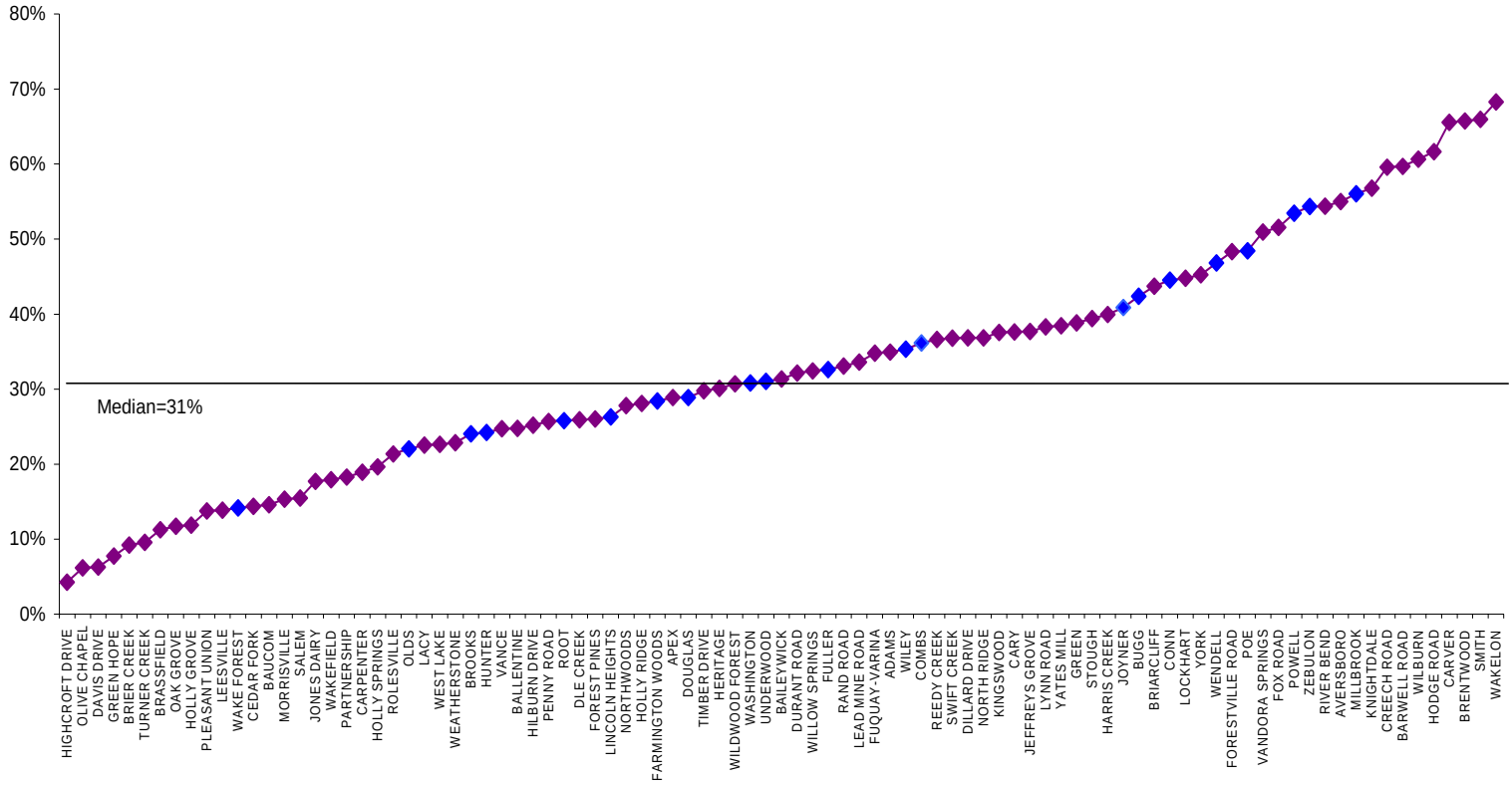


Note: Blue diamonds represent magnet schools.

The percentages of FRL students at the 93 WCPSS elementary schools in 2006-07 are plotted in Figure 6. Magnet elementary schools, shown in blue, are less likely than non-magnet elementary schools to fall at the extreme ends of the distribution.

- The average percentage of FRL students for all elementary schools was 33%, with a standard deviation of 16%, and a broad range of 4% to 68%.
- Magnet schools average percentage of FRL students was slightly higher at 36%, however, the range was narrower (14% to 56%). Most of the magnet schools fall in the middle of the elementary distribution.

Figure 6
Percentage of FRL Students at WCPSS Elementary Schools, 2006-07

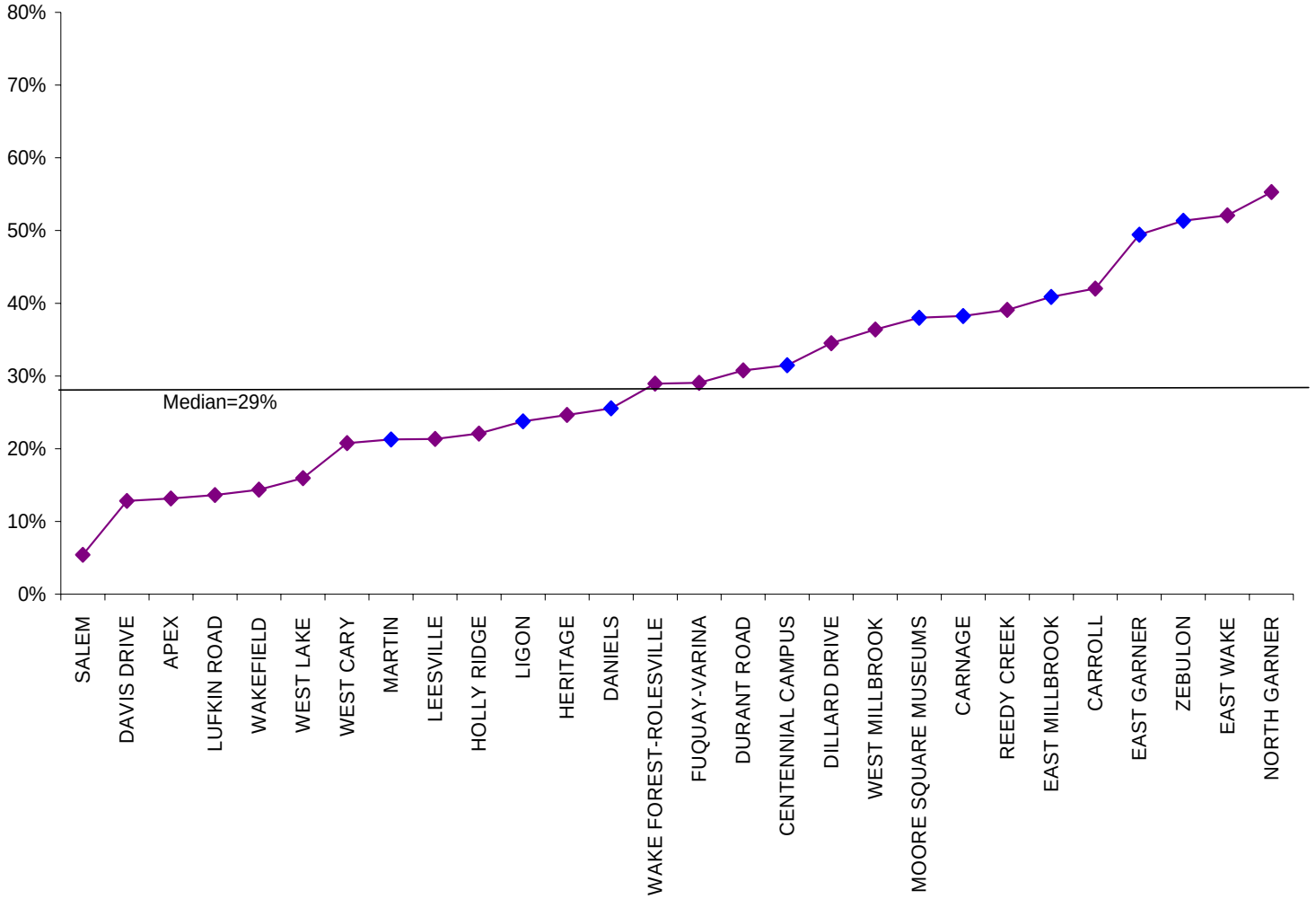


Note: Blue diamonds represent magnet schools.

Figure 7 shows the distribution of WCPSS middle schools by the percentage of their FRL students in 2006-07.

- The average percentage of FRL students for the 28 middle schools was 30% with a range of 5% to 55%.
- For the nine magnet middle schools, represented in blue, the average was slightly higher (36%), but the range was narrower (21% to 51%).
- Six of the nine magnet middle schools had above average percentages of FRL students.

Figure 7
Percentage of FRL Students at WCPSS Middle Schools, 2006-07

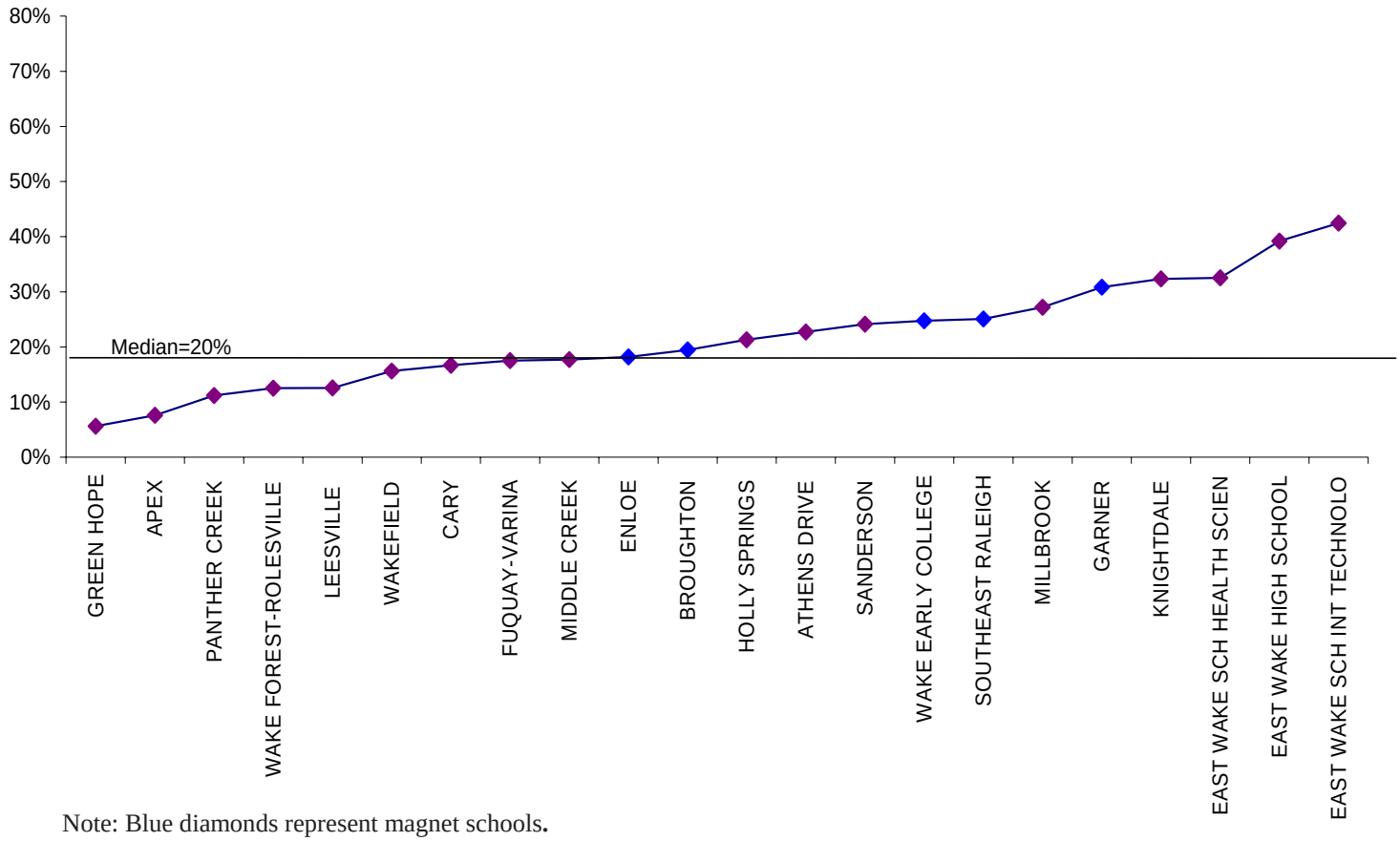


Note: Blue diamonds represent magnet schools.

The percentages of FRL students at WCPSS high schools in 2006-07, including the School of Health and Science and School of Integrated Technology at East Wake High School, are plotted in Figure 8. The reported percentages of FRL students are lower at the high school level compared to elementary and middle school.

- The average percentage of FRL students for the 22 high schools was 22% with a range of 6% to 43%.
- For the five magnet high schools, represented in blue, the average was slightly higher (25%) and the range was more constricted (18% to 31%).
- Enloe and Broughton High Schools were the only magnet high schools with below average percentages of FRL students.

Figure 8
Percentage of FRL Students at WCPSS High Schools, 2006-07

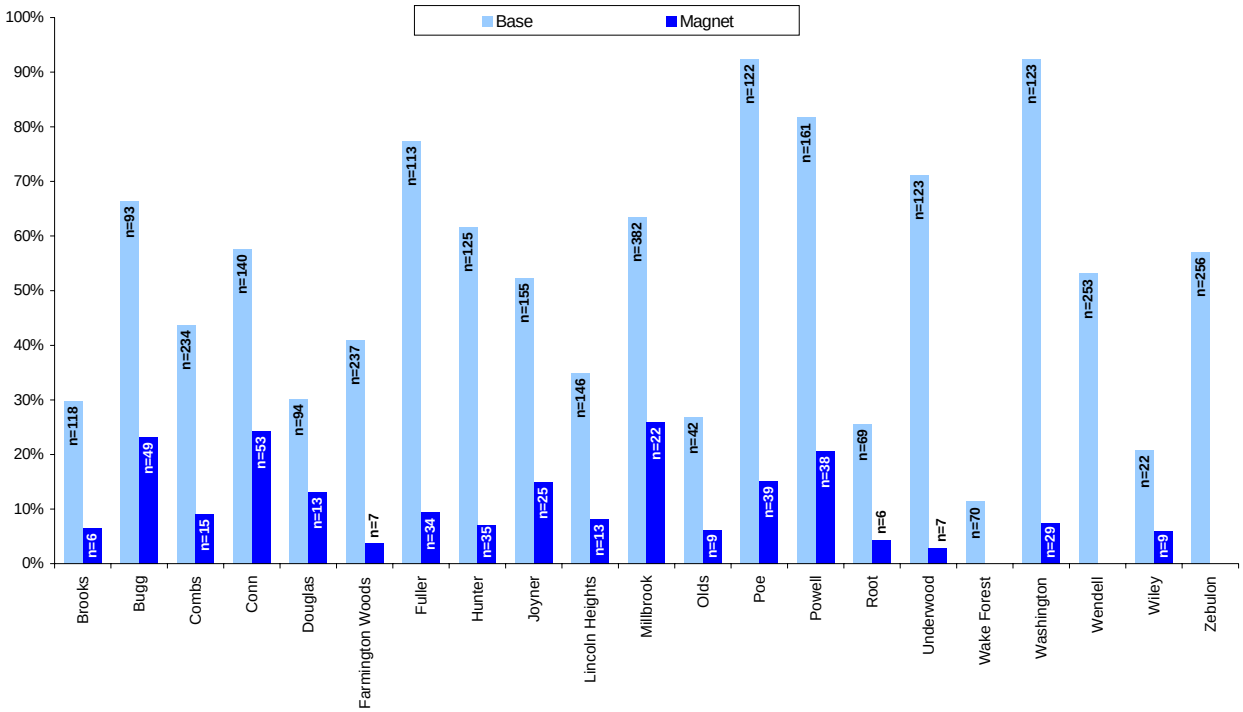


Note: Blue diamonds represent magnet schools.

Figure 9 shows the percentage of FRL students for two groups of students at WCPSS magnet elementary schools: base students who are students assigned to the school and magnet students who voluntarily attend the school. Overall, the base students are more likely to be FRL students than their magnet counterparts.

- At every elementary magnet school, the percentage of FRL base students was considerably higher than the percentage of FRL magnet students, except for the equity magnets which have a base student population only.
- Overall, the percentage of FRL students at each magnet school was reduced as a result of magnet student enrollment in the school. The degree of the reduction depends on the comparative proportion of base and magnet students at the school.

Figure 9
Percentage of FRL Students at WCPSS Elementary Schools by Student Assignment Indicator

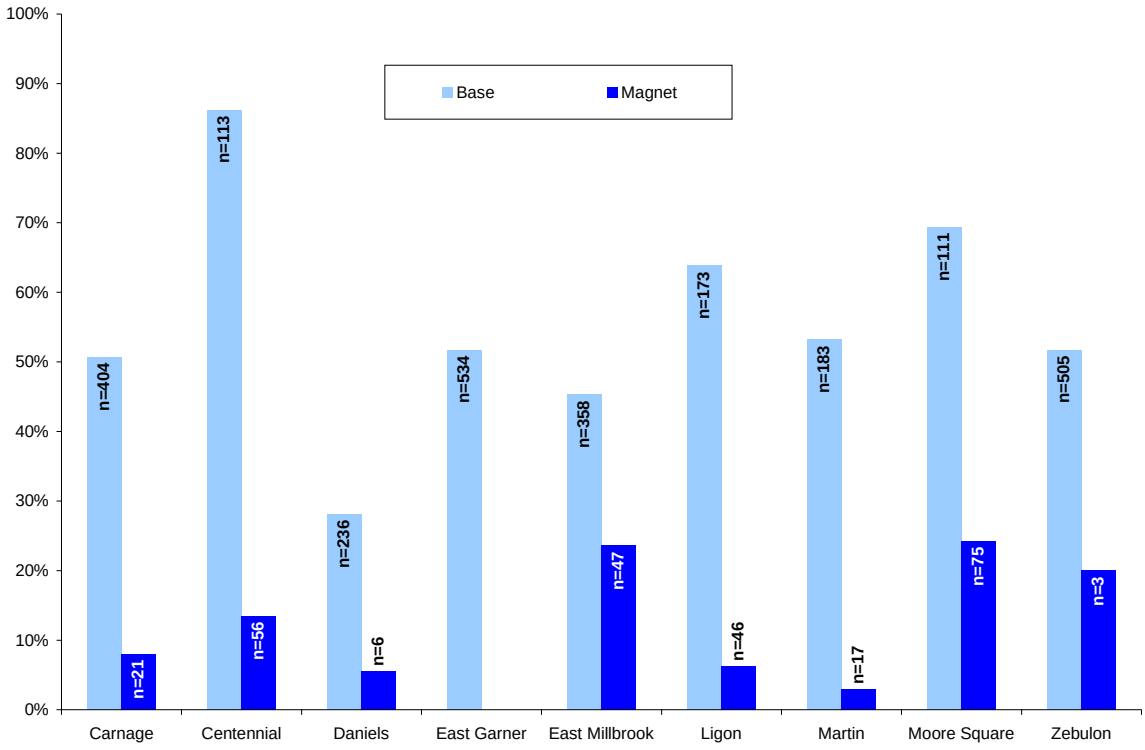


Note: Wake Forest, Wendell, and Zebulon Elementary Schools are equity magnets. Equity magnets do not accept magnet applications, and therefore, do not have a magnet student population.

The percentages of FRL base students assigned to magnet middle schools are compared to the percentages of FRL magnet students in Figure 10. At magnet middle schools, a greater proportion of base students receive free or reduced-price lunch than magnet students.

- The percentage of FRL base students was substantially higher than the percentage of FRL magnet students at all magnet middle schools, excluding East Garner Middle School, which is an equity magnet and serves base students only.
- It is likely that the overall percentage of FRL students at magnet middle schools would noticeably increase if these schools were demagnetized.

Figure 10
Percentage of FRL Students at WCPSS Middle Schools
by Student Assignment Indicator

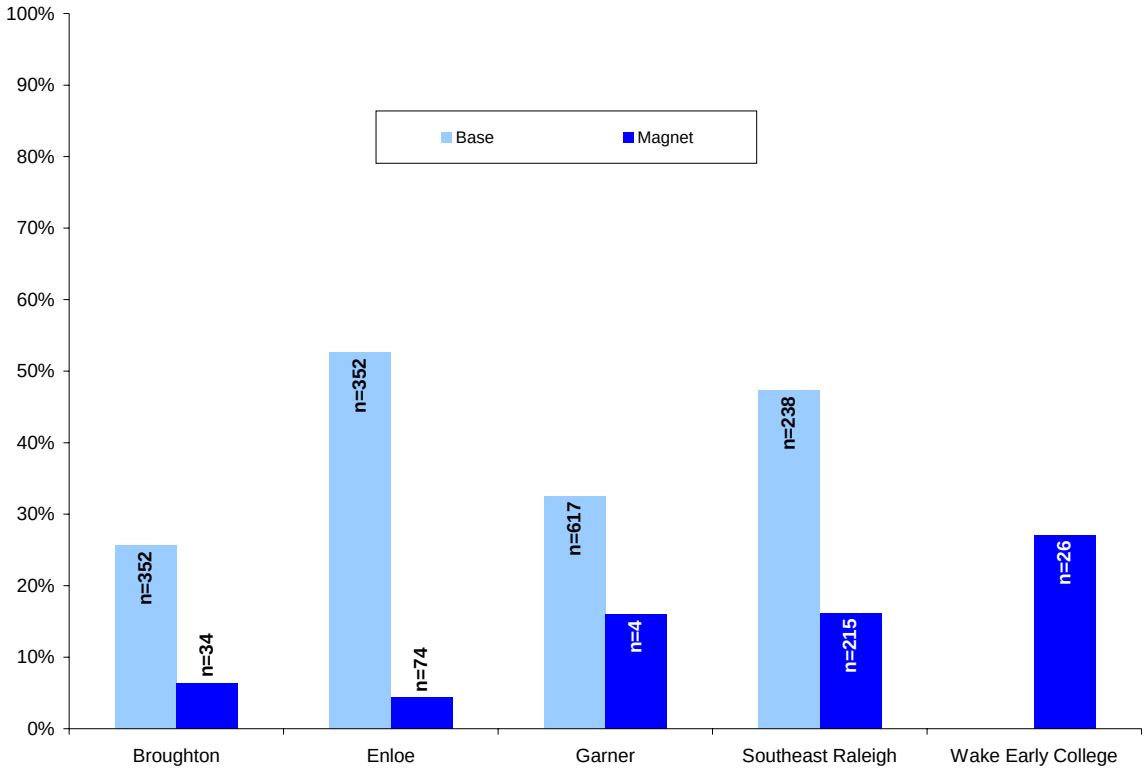


Note: East Garner Middle Schools is an equity magnet. Equity magnets do not accept magnet applications, and therefore, do not have a magnet student population.

Figure 11 offers the same presentation for the base and magnet students attending magnet high schools. Results indicate that magnet students help reduce the overall percentage of FRL students at magnet high schools, which creates a more economically diverse student population.

- At every magnet high school, except Wake Early College High School, which serves magnet application students only, the percentage of FRL base students was noticeably higher than the percentage of FRL magnet students.
- Notice that the number of FRL base students was equal at Enloe and Broughton High Schools; however, the percentage of FRL base students at Enloe was almost twice that of Broughton. This is because the base student population at Enloe was half the size of Broughton in 2005-06.
- The economic status of magnet students helps to ensure that high schools serve a more diverse student population than they would if only the base students attended the school.

Figure 11
Percentage of FRL Students at WCPSS High Schools by Student Assignment Indicator



Note: Wake Early College High School has a magnet application student population only.

Diverse Student Populations and Lower Concentrations of Poverty Summary

Findings suggest that magnet schools have been an effective means of promoting diverse student populations, in terms of sustaining economic heterogeneity among students, and reducing high concentrations of poverty. At all magnet schools serving base and magnet students, the percentage of FRL base students was consistently higher than the percentage of FRL magnet students. Magnet schools also tended to have more moderate percentages of FRL student populations compared to non-magnet schools. The affluence of magnet students appears to ameliorate the economic composition of magnet schools. The extent to which these magnet students reduce the concentration of poverty at a school depends on the comparative proportion of base and magnet students at the school. It is likely, however, that the overall percentage of FRL students at magnet schools would noticeably increase if these schools were demagnetized.

Methodology for Improved Student Achievement Analyses

E&R staff, Magnet Program staff, and Wake County Board members have been discussing the definition of student achievement as written in the April 2005 objectives. Using choice to increase student achievement can be interpreted in many ways. There is agreement that magnet schools were intended to promote improved student achievement system-wide. Although it is not empirically possible to assess what overall WCPSS student achievement would be like without the magnet program, various analyses can provide useful information related to this objective.

In 2002-03, magnet program staff conducted research comparing WCPSS to three large school districts in North Carolina: Forsyth, Guilford, and Mecklenburg. The data show more economic diversity and higher district achievement and performance in WCPSS schools compared to the schools in the other districts. More recently, in 2005-06, magnet staff compared proficiency rates on End-of-Grade exams (EOG) and End-of-Course (EOC) exams for students across five large districts in the state: Cumberland, Forsyth, Guildford, Mecklenburg, and Wake County. Compared to these other school districts, as well as the state, WCPSS had a considerably higher percentage of students passing EOG and EOC exams across all student subgroups. The economic balance of WCPSS schools, which is partially maintained by the objectives of the magnet program, may contribute to the high levels of student achievement in the district.

Increasing student achievement may also be interpreted at the school level. If it is expected that magnet schools will contribute to system-wide student achievement, it is desirable that students in magnet schools show academic achievement at least equal to that of other schools with similar characteristics. This information can be quite valuable in reviewing the overall health of magnet schools and suggesting areas for review.

E&R staff conducted school-level analyses to examine whether WCPSS magnet schools show similar achievement trends as non-magnet schools. Each of the program magnet schools operating in 2005-06 (see Appendix B for a list of magnet schools operating in 2005-06 and 2006-07), excluding equity magnets, was matched to a comparable non-magnet school. All matches are one-to-one, except for two instances in which two magnet middle schools were

matched to one non-magnet school because no viable alternative was available. The selection criteria for the non-magnet comparison schools included similar grade level (e.g., elementary magnet schools were matched to elementary non-magnet schools and so forth), total number of students, percentage of FRL student population, and when possible, district area (see Table 2). The number of students and percentage of FRL students at each school were based on May 2006 data. Services and programs offered at the schools such as Title I, Partnership for Educational Success (PES), Positive Behavior Support (PBS), and Project Achieve were secondarily considered in the selection process. Nevertheless, magnet schools and non-magnet comparison schools are just as likely to be Title I and/or PES schools. As shown in Table 2, magnet schools are more likely than comparison non-magnet schools to have only one of the four aforementioned programs at their school. Thus, some non-magnet schools offer a greater variety of programs aimed at improving climate or academic achievement in their school.

Table 2
Matched Sample Characteristics

		Magnet Schools (*N*=35)	**Comparison Schools (*N*=33)**
Grade Level	Elementary School	21	21
	Middle School	10	8
	High School	4	4
District Area	Central	17	3
	Eastern	4	4
	Northern	1	8
	South Central	8	5
	Southern	4	6
	Western	1	7
Services and Programs*	None	10	14
	One	17	5
	More than one	8	14

Note: ***** Service and programs at the school include Title I, Partnership for Educational Success (PES), Positive Behavior Support (PBS), and Project Achieve.

2005-06 Healthy Schools data including various performance and academic indicators such as ABCs performance composites for 2003-04 to 2005-06, ABCs growth composite, AYP targets met, and number of students suspended, as well as select climate, staffing, and student population variables were analyzed for magnet and non-magnet comparison schools. Descriptive statistics and summary results for these indicators were analyzed and compared across magnet and comparison non-magnet elementary, middle, and high schools. The academic and performance variables of each matched pair of magnet and non-magnet schools were also compared.

School-Level Achievement Results

Tables 3-5 present descriptive statistics for magnet and non-magnet comparison schools grouped by elementary, middle, and high school levels. The findings show that the magnet schools and the non-magnet comparison schools are healthy schools. On average, magnet and non-magnet comparison schools have similar performance composites, growth composites, and AYP results, as well as school climate, school staffing, and student populations. Some statistically significant differences are apparent between magnet elementary schools and non-magnet comparison schools, as shown in Table 3.

- In 2003-04, the average performance composite for the 21 magnet elementary schools (89.1%) was 2.9 percentage points lower than the average performance composite for the 21 non-magnet comparison schools (92%). This difference was statistically significant. No significant differences were found between the average performance composites of magnet and non-magnet comparison schools in 2004-05 or 2005-06, or between the other academic and performance variables.
- On average, statistically fewer parents of magnet elementary students were likely to return the parent survey compared to parents of students attending the non-magnet comparison schools.
- The average percentage of minority teachers at magnet elementary schools (15.2%) was significantly greater than the average percentage of minority teachers at non-magnet comparison schools (10.5%).
- The average percentage of limited English proficient (LEP) students for the 21 magnet elementary schools (4.7%) was 3.6 percentage points lower than the average percentage of LEP students at the 21 non-magnet comparison schools (8.3%). This difference was statistically significant.
- The stability of 3^{rd}-5^{th} grade students, defined as the average percentage of students who had accumulated more than 160 days in membership at their school by the end of the year, was significantly greater at the magnet elementary schools than the non-magnet comparison schools.

Table 4 shows similar healthy schools data for magnet middle schools and their non-magnet comparison schools. There are no statistical differences between the means of any of the select healthy school variables. The descriptive statistics for high schools are presented in Table 5 and show only one significant difference between the academic growth of magnet high schools and non-magnet high schools.

- The average growth composite for the four magnet high schools was significantly lower than the average growth composite for the four comparison non-magnet schools.

Table 3
Elementary School Descriptive Statistics, 2005-06

		Magnet Schools (*n*=21)		Comparison Schools (*n*=21)	
		Mean	**Range**	**Mean**	**Range**
Performance and Academic Issues	ABCs Performance Composite: 2005-06	77.0	62.9-89.2	78.3	70.6-88.9
	ABCs Performance Composite: 2004-05	88.5	83.9-97.2	90.5	83.9-94.4
	ABCs Performance Composite: 2003-04	89.1	82.8-95.8	92.0	88.3-97.3
	ABCs Growth Composite: 2005-06	0.0	-0.16-0.15	0.1	-0.11-0.19
	Number of AYP Targets	19.8	17-29	19.6	13-29
	Number of AYP Targets Met	18.6	13-29	18.8	13-29
	% AYP Targets Met	93.8	76.2-100	96.2	81.3-100.0
	Student Attendance	95.8	95.1-97.0	96.1	95.3-98.0
Climate	% Parents Rating Quality of School Excellent or Good	79.5	70.5-86.4	78.0	65.4-90.5
	% Parents Returning the Survey	35.9	17.8-55.5	43.6	32.2-77.4
	Number of Students Suspended	31.6	0-84	24.5	5-54
Staffing	Total Teachers	44.0	24-69	43.7	23-56
	Number of Certified Teachers	40.9	22-65	39.8	22-53
	% Staff Turnover	9.4	0-20.5	8.4	0-22.6
	Teachers: % Minority	15.2	3.9-36.1	10.5	2.2-22.2
	Teachers: % 25 Years or more	12.9	2.3-28.1	11.3	0-26.2
	Teachers: % National Board	5.7	0-18.8	5.7	0-11.9
	Teachers: % with Higher than a 4-year Degree	33.1	15.9-45.8	29.7	15.9-42.1
Student Population	20th Day Membership	549.7	337-796	596.1	306-845
	% FRL Students	35.6	14.3-54.7	35.0	18.1-52.9
	% LEP Students	4.7	0.2-20.7	8.3	0-15.6
	% Level I and II Students	15.5	6.3-27.7	14.4	7.0-20.4
	% SWD Students	15.4	9.4-21.5	14.1	9.5-18.2
	Stability (Grades 3-5 only)	93.0	87.3-99.1	88.3	84.0-96.6

Note: Highlighted cells indicate a significant difference (< 0.05 level) between the magnet school mean and the comparison school mean based on t-test results.

Each school's stability percentage is defined as the percentage of students who had accumulated more than 160 days in membership at their school by the end of the year. Percentages were generated based on system-wide student roster data.

Table 4
Middle School Descriptive Statistics, 2005-06

		Magnet Schools (*n*=10)		Comparison Schools (*n*=8)	
		Mean	**Range**	**Mean**	**Range**
Performance and Academic Issues	ABCs Performance Composite: 2005-06	73.9	65.3-86.2	75.2	67.4-83.7
	ABCs Performance Composite: 2004-05	85.6	78.1-91.9	87.6	83.0-92.1
	ABCs Performance Composite: 2003-04	87.3	80.0-93.0	88.1	84.4-95.4
	ABCs Growth Composite: 2005-06	0.03	-0.04-0.10	0.07	-0.01-0.17
	Number of AYP Targets	28.2	21-37	28.5	25-33
	Number of AYP Targets Met	24.4	18-34	25.8	22-31
	% AYP Targets Met	87.0	75.8-100.0	90.4	75.9-100.0
	Student Attendance	94.6	93.4-96.0	94.7	93.5-95.7
Climate	% Parents Rating Quality of School Excellent or Good	76.9	63.9-89.9	71.4	59.4-81.0
	% Parents Returning the Survey	29.1	12-40.5	39.0	22.6-60.3
	Number of Students Suspended	327.4	119-500	298.8	130-497
Staffing	Total Teachers	65.1	38-77	66	45-92
	Number of Certified Teachers	59.4	33-72	61.6	42-86
	% Staff Turnover	14.2	4.1-33.3	7.3	2.2-14.5
	Teachers: % Minority	24.1	11-37.1	21.7	12.5-37.8
	Teachers: % 25 Years or more	13.7	6.3-19.2	18.2	12.3-29.1
	Teachers: % National Board	7.0	0-13.2	6.2	2.2-10.9
	Teachers: % with Higher than a 4-year Degree	28.1	10.9-39.4	33.5	24.4-41.8
Student Population	20th Day Membership	901.9	456-1,100	937.6	647-1,127
	% FRL Students	36.7	20.4-50.5	33.4	18.9-52.7
	% LEP Students	3.9	0.2-8.8	6.6	1.3-12.0
	% Level I and II Students	37.2	19.2-49.8	33.7	23.2-45.1
	% SWD Students	18.6	13.3-28.7	17.7	13.1-23.2
	Stability (Grades 3-5 only)	90.5	85.7-96.4	89.0	87.7-91.4

Note: In two instances, two magnet schools were compared to two comparison schools.

There are no significant differences (< 0.05 level) between magnet school means and comparison school means. Each school's stability percentage is defined as the percentage of students who had accumulated more than 160 days in membership at their school by the end of the year. Percentages were generated based on system-wide student roster data.

Table 5
High School Descriptive Statistics, 2005-06

		Magnet Schools (*n*=4)		Comparison Schools (*n*=4)	
		Mean	**Range**	**Mean**	**Range**
Performance and Academic Issues	ABCs Performance Composite: 2005-06	76	67-8-82.9	80.1	73.9-84.6
	ABCs Performance Composite: 2004-05	78.9	68.2-84.1	83.6	78.2-88.7
	ABCs Performance Composite: 2003-04	77.1	65.5-81.4	82.6	77.7-88.6
	ABCs Growth Composite: 2005-06	-0.09	-0.15-(-0.04)	0.04	-0.04-0.14
	Number of AYP Targets	23	21-25	23.3	21-28
	Number of AYP Targets Met	21	19-25	20.5	16-28
	% AYP Targets Met	91.6	76-100	87.3	76.2-100
	Student Attendance	95.4	94-96.2	95.3	94.5-96.1
	Dropout Rate - 2004-05	3.7	2.4-5.6	4.2	2.9-5.3
Climate	% Parents Rating Quality of School Excellent or Good	75.7	61.3-83.8	72.0	52.8-82.9
	% Parents Returning the Survey	11.2	3.4-20.5	19.8	5-40.5
	Number of Students Suspended	479	328-708	487.5	245-776
Staffing	Total Teachers	140.5	133-156	126.8	116-150
	Number of Certified Teachers	131.3	122-151	118	110-136
	% Staff Turnover	9.9	5.1-13.1	7.8	6-10
	Teachers: % Minority	18.3	8.3-31.4	13.8	10.7-17.2
	Teachers: % 25 Years or more	15.6	12.4-18	18.1	8.3-26.4
	Teachers: % National Board	13.3	8.8-16.8	11.8	9.2-14.9
	Teachers: % with Higher than a 4-year Degree	43.1	36-52.6	36.7	32.5-40.7
Student Population	20th Day Membership	2,159	2,096-2,312	2,152.8	1,894-2,499
	% FRL Students	22.9	16.8-31.1	20.2	15.2-24.1
	% LEP Students	2.8	0.6-5.5	5.3	4.2-6.6
	% Level I and II Students	29	22.2-36.5	26	20.4-33.2
	% SWD Students	14.5	10.9-18.5	13.7	11.5-14.8
	Stability (Grades 3-5 only)	95.7	92.5-98.7	94.1	93.1-95.2

Note: Highlighted cells indicate a significant difference (< 0.05 level) between the magnet school mean and the comparison school mean based on t-test results.

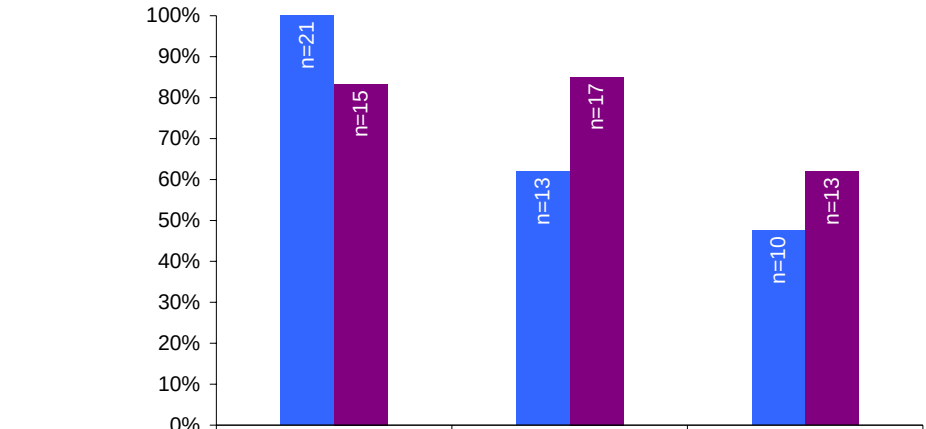
Each school's stability percentage is defined as the percentage of students who had accumulated more than 160 days in membership at their school by the end of the year. Percentages were generated based on system-wide student roster data.

Achievement trends illustrated in Figures 12-15 show the percentage of magnet and non-magnet schools that made AYP in 2003-04, 2004-05, and 2005-06 and the percentage of schools making expected growth, high growth or not making expected growth for the same years (the blue bars represent magnet schools). 2004-05 was the final year that school accountability was measured with the original growth formulas of the ABCs of Public Education. In 2005-06, the new growth formulas went into effect following a comprehensive review of the original formulas and their capacity to accurately reflect the academic growth of schools. The results are presented by elementary and secondary (middle school and high school) levels and reflect cohort data.

Figure 12 shows that over this three-year period, magnet schools shifted from being more likely to make AYP than their non-magnet counterparts to being less likely to make AYP.

- In 2003-04, all 21 elementary magnet schools made AYP compared to 83% of the 18 non-magnet comparison schools with AYP data for that year.
- The percentage of magnet schools making AYP dropped considerably in 2004-05 when the first incremental increase in proficiency target goals took effect; however, non-magnet comparison schools appeared to be relatively unaffected by this change.
- By 2005-06, less than half of magnet schools were making AYP and the percentage of non-magnet comparison schools making AYP declined as well.

Figure 12
Percentage of Elementary Magnet and Comparison Schools Making AYP, 2003-04 to 2005-06



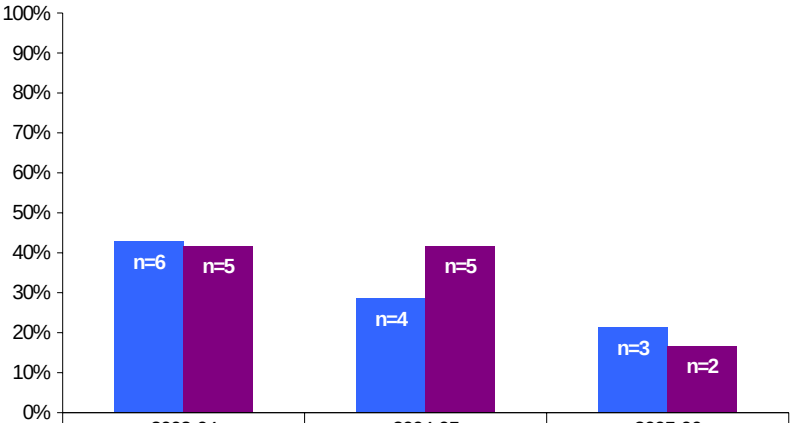
	2003-04	2004-05	2005-06
Magnet (n=21)	100.0%	61.9%	47.6%
Comparison (n=21)	83.3%	85.0%	61.9%

Note: Three comparison schools were missing AYP data in 2003-04 (*n*=18) and two comparison schools were missing AYP data in 2004-05 (*n*=20). Blue bars represent magnet schools.

Figure 13 shows a similar general trend in the AYP status of secondary magnet and non-magnet comparison schools compared to elementary schools, although yearly changes are less dramatic. Overall, there is a lower percentage of secondary schools making AYP than elementary schools.

- A similar percentage of secondary magnet schools and non-magnet comparison schools made AYP in 2003-04.
- In 2004-05 the percentage of non-magnet comparison schools making AYP remained stable, regardless of the increase in proficiency target goals, whereas magnet schools experienced a decline in the percentage making AYP.
- The percentage of secondary schools making AYP declined in 2005-06 for both magnet and non-magnet comparisons schools. Compared to 2003-04 results, only half as many magnet and non-magnet comparison schools made AYP in 2005-06.

Figure 13
Percentage of Secondary (Middle School and High School) Magnet and Comparison Schools Making AYP, 2003-04 to 2005-06



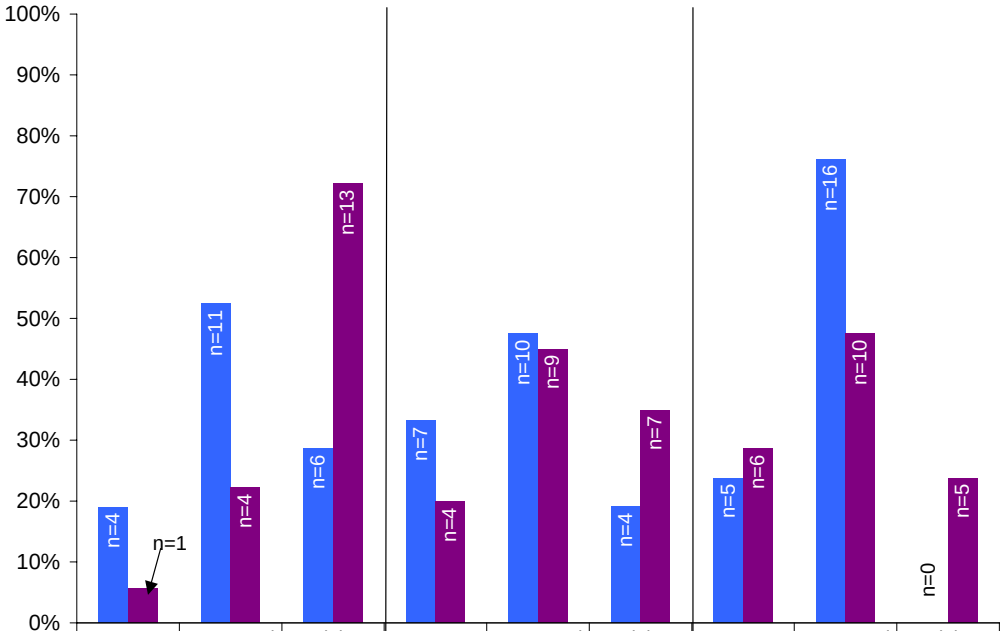
	2003-04	2004-05	2005-06
Magnet (n=14)	42.9%	28.6%	21.4%
Comparison (n=12)	41.7%	41.7%	16.7%

Note: Blue bars represent magnet schools.

Figure 14 presents the ABCs growth composites for elementary magnet and non-magnet comparison schools for 2003-04, 2004-05, and 2005-06. Every year, non-magnet comparison schools exhibit higher growth composites than magnet schools; in particular, they produce more schools making high growth.

- In 2003-04, only 4 magnet elementary schools and 1 non-magnet comparison school did not make expected growth. However, non-magnet comparison schools were twice as likely as magnet schools to make high growth.
- Growth composites declined for both groups in 2004-05. A larger number of magnet and non-magnet comparison schools did not meet expected growth in 2004-05 compared to the prior year. Magnet and non-magnet comparison schools were equally likely to make expected growth in 2004-05. A larger percentage of non-magnet comparison schools still made high growth compared to magnet schools, despite the decline in high growth schools from the pervious year for both groups.
- The percentage of magnet elementary schools making expected growth soared in 2005-06 to 76%. This increase is partially reflective of no magnet elementary schools making high growth. The remaining magnet schools did not make expected growth. The growth patterns of non-magnet comparison schools held constant from the previous year.

Figure 14
Elementary Magnet and Comparison Schools by ABCs Growth Composite, 2003-04 to 2005-06



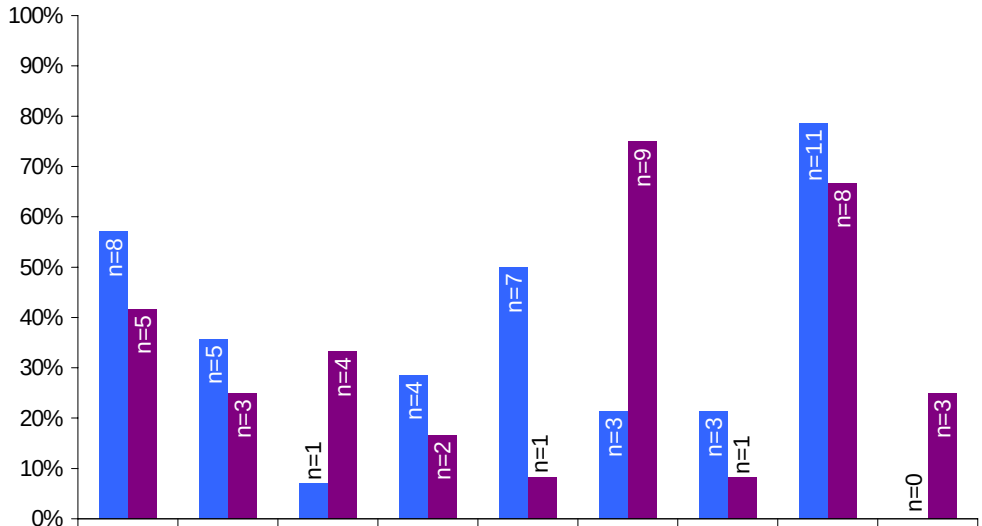
	2003-04			2004-05			2005-06		
	Not Met	Expected	High	Not Met	Expected	High	Not Met	Expected	High
Magnet (n=21)	19.0%	52.4%	28.6%	33.3%	47.6%	19.1%	23.8%	76.2%	0.0%
Comparison (n=21)	5.6%	22.2%	72.2%	20.0%	45.0%	35.0%	28.6%	47.6%	23.8%

Note: Three comparison schools were missing AYP data in 2003-04 (*n*=18) and two comparison schools were missing AYP data in 2004-05 (*n*=20). Blue bars represent magnet schools.

ABCs growth composites for secondary magnet and non-magnet comparison schools for 2003-04, 2004-05, and 2005-06 are illustrated in Figure 15. Non-magnet comparison schools have higher growth composites than magnet schools at the secondary level as well. 2004-05 was an extraordinary year of high growth for magnet schools and non-magnet comparison schools in particular. Results of the ABCs growth formulas showed that the formulas' effectiveness had decreased at the middle school level. As a result, middle school growth appeared unusually low in 2003-04 and 2004-05. In 2003-04, the State Board of Education considered a variety of options, including calculating middle school growth without including sixth grade reading, the measure most affected by the formula's effectiveness. Because this phenomenon occurred for a second consecutive time in 2004-05, State Board members chose to approve the ABCs results with sixth grade reading removed from the growth formula calculations. This adjustment likely explains the large increase in schools making high growth in 2004-05.

- Over half of magnet secondary schools did not make expected growth in 2003-04. Conversely, the majority of secondary non-magnet comparison schools made either expected or high growth.
- In 2004-05, results improved, following the adjustment in the growth formula calculations for middle schools. Three-fourths of secondary non-magnet schools made high growth compared to slightly less than one-fourth of magnet schools.
- Most (78%) secondary magnet schools made expected growth in 2005-06, while the remaining did not. None of the secondary magnet schools made high growth. Comparatively, two-thirds of non-magnet comparison schools made expected growth and one-fourth made high growth.

Figure 15
Secondary Magnet and Comparison Schools by ABCs Growth Composite, 2003-04 to 2005-06



	2003-04			2004-05			2005-06		
	Not Met	Expected	High	Not Met	Expected	High	Not Met	Expected	High
Magnet (n=14)	57.1%	35.7%	7.1%	28.6%	50.0%	21.4%	21.4%	78.6%	0.0%
Comparison (n=12)	41.7%	25.0%	33.3%	16.7%	8.3%	75.0%	8.3%	66.7%	25.0%

Note: Blue bars represent magnet schools.

While the data presented in Figures 12-15 present analyses that treated magnet and non-magnet comparison schools as two groups, Tables 6-8 contrast the academic and performance outcomes for each matched pair of magnet and non-magnet comparison schools. Typically, each magnet school has similar academic and performance outcomes as its matched non-magnet school.

Table 6 shows the results when comparing the members of each matched pair on several variables. Overall, there is no difference between their academic and performance outcomes. However when a difference does occur, it tends to favor the non-magnet comparison school.

- Non-magnet comparison schools had higher ABCs growth composites than their matched magnet schools in 2003-04 and 2004-04, however the growth composites were more similar in 2005-06.
- Magnet schools and non-magnet comparison schools were equally likely to have made AYP in 2003-04, 2004-05, and 2005-06 and had similar average performance composites.
- There was no difference in the number of students suspended for nine of the matched pairs. In nine additional pairs, the non-magnet comparison schools had fewer students suspended in 2005-06 than their magnet counterparts.

Table 6
Academic and Performance Outcomes of
Elementary Magnet Schools versus Comparison Schools, 2003-04 to 2005-06

Matched Pairs	Higher ABCs Growth			Made AYP			Higher Average PC	Lower Number of Students Suspended 2005-06
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06		
1	C	C	ND	ND	ND	ND	ND	C
2	ND	C	C	ND	ND	ND	ND	ND
3	ND	M	C	ND	ND	C	ND	C
4	M	C	ND	ND	C	ND	ND	ND
5	C	C	C	ND	C	ND	ND	ND
6	C	ND	ND	ND	ND	M	ND	ND
7	~	~	M	~	~	M	~	C
8	ND	M	C	ND	C	C	ND	M
9	M	M	M	ND	C	C	ND	C
10	ND	C	ND	ND	C	ND	C	C
11	ND	M	M	ND	C	C	C	M
12	M	C	ND	M	ND	M	M	ND
13	C	C	ND	ND	ND	C	C	C
14	C	C	ND	ND	C	C	ND	ND
15	C	M	C	ND	ND	ND	ND	C
16	C	C	ND	M	ND	M	ND	ND
17	C	C	ND	M	M	ND	ND	C
18	C	M	C	ND	M	C	ND	C
19	~	C	M	~	ND	ND	~	ND
20	ND	C	C	ND	ND	ND	C	ND
21	~	ND	ND	~	M	ND	ND	M
Total ND = 71	6	2	10	15	10	10	14	9
Total C = 56	9	12	7	0	7	7	4	9
Total M = 31	3	6	4	3	3	4	1	3
Total ~ = 10	3	1	0	3	1	0	2	0

Note: ND = No Difference (between magnet and comparison school)
C = Comparison School
M = Magnet School
~ = Data Unavailable
Average performance composite (PC) for years 2003-04, 2004-05, 2005-06 is higher by at least 5 percentage points.
Number of students suspended is lower by at least 10.

As illustrated in Table 7, when compared individually, magnet middle schools and non-magnet comparison middle schools have similar growth composites and similar average performance composites for 2003-04, 2004-05, and 2005-06. Magnet and non-magnet comparison schools are also equally likely to have made AYP in 2003-04, 2004-05, and 2005-06, and suspended a comparable number of students in 2005-06.

Table 7
Academic and Performance Outcomes of
Magnet Middle Schools versus Comparison Middle School, 2003-04 to 2005-06

Matched Pairs	Higher ABCs Growth			Made AYP			Higher Average PC	Lower Number of Students Suspended 2005-06
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06		
1	ND	C	ND	M/ND	ND	ND	ND	C
2	ND	ND	C	ND	C	ND	ND	M
3	ND	C	C	ND	ND	ND	ND	M
4	ND	ND	ND	ND	M	ND	M	C
5	ND	M	ND	ND	ND	ND	ND	C
6	C	C	C	ND	C	ND	ND	M
7	ND	M/ND	ND	M/ND	ND	ND	ND	M
8	ND	C	M	ND	ND	ND	ND	C
Total ND = 41	7	3	4	8	5	8	7	0
Total C = 15	1	4	3	0	2	0	0	4
Total M = 12	0	2	1	2	1	0	1	4

Note: ND = No Difference (between magnet and comparison school)
C = Comparison School
M = Magnet School.
Highlighted rows indicate two magnet schools matched to one comparison school and M/ND indicates that for the same outcome variable, one magnet school outperformed the comparison school while there was no difference between the performance of the other magnet school and the same comparison school. Average performance composite (PC) for years 2003-04, 2004-05, 2005-06 is higher by at least 5 percentage points. Number of students suspended is lower by at least 10.

Table 8 shows that some differences exist between the academic and performance outcomes of magnet high schools and their non-magnet counterparts; however these differences tend to decrease over time.

- Non-magnet comparison schools had higher growth composites than their matched magnet schools in 2003-04 and 2004-05, however the growth composites were more similar in 2005-06.
- Magnet schools and non-magnet comparison schools were equally likely to have made AYP in 2003-04, 2004-05, and 2005-06.
- Two of the four non-magnet comparison high schools had higher average performance composites than their magnet counterparts.
- Three of the four magnet high schools had lower numbers of students suspended in 2005-06 than their matched non-magnet schools.

Table 8
Academic and Performance Outcomes of
Magnet High Schools versus Comparison High Schools, 2003-04 to 2005-06

Matched Pairs	Higher ABCs Growth			Made AYP			Higher Average PC	Lower Number of Students Suspended 2005-06
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06		
1	C	C	ND	ND	ND	ND	C	M
2	C	ND	C	C	C	M	ND	C
3	ND	C	C	ND	M	ND	ND	M
4	C	C	ND	ND	ND	ND	C	M
Total ND = 14	1	1	2	3	2	3	2	0
Total C = 13	3	3	2	1	1	0	2	1
Total M = 5	0	0	0	0	1	1	0	3

Note: ND = No Difference (between magnet and comparison school)
C = Comparison School,
M = Magnet School.
Average performance composite (PC) for years 2003-04, 2004-05, 2005-06 is higher by at least 5 percentage points. Number of students suspended is lower by at least 10.

Improved Student Achievement Summary

The findings show that magnet schools and non-magnet comparison schools are healthy schools. Statistically significant differences between achievement outcomes were rare and occurred primarily at the elementary level. Few differences were apparent between the academic and performance outcomes of individual pairs of magnet and non-magnet comparison schools. However, when differences occurred they tended to favor the non-magnet comparison school.

Question 3: What are the expanded educational opportunities offered within the Magnet Program?

Methodology

E&R staff conducted an on-line survey of magnet school principals to gather information about the expanded educational opportunities offered at their schools. Each of the 35 magnet school principals was sent an email detailing the purpose of the survey and encouraging their participation. A link to the on-line survey was also included in the email. The survey consisted of five open-ended questions and was estimated to take approximately 20-30 minutes to complete. Of the 35 magnet school principals, 29 completed the survey, yielding a response rate of 83%. Participating principals provided valuable personal insights, details, and examples on the expanded educational opportunities offered at their magnet schools.

Survey Results

Available Instructional Opportunities or Approaches

Q. What instructional opportunities or approaches are provided at your magnet school that would not be available if it were not a magnet school?

Principals discussed several instructional opportunities or approaches provided at their magnet schools that they thought would not be available without the Magnet Program. Generally, principals at similar thematic magnet schools tended to identify instructional opportunities and approaches aligned with that theme. The International Baccalaureate (IB) Programme, the Gifted and Talented (GT) program, use of popular literature to enhance learning, and project-based learning are the major instructional opportunities principals said would not be available at their schools if they were not magnets.

IB Programme

The majority of IB magnet school principals responding to the survey remarked that the IB Primary Years Programme (IB PYP), the IB Middle Years Programme (IB MYP), and the IB Diploma Programme would not be available at their schools without their involvement in the WCPSS Magnet Program. One principal commented on the collaboration between IB magnet schools.

> We have a wonderful partnership with East Millbrook Middle and Broughton to form our IB MYP magnet program. We work together to map curriculum, incorporate inquiry and IB curriculum into our lessons, utilize the IB assessments in our lessons, and foster an international approach and focus of the curriculum. Through the MYP program we provide students with the opportunity to prepare for the rigor of the Diploma Programme in 11th and 12th Grade. The tenth graders in our IB MYP prepare and present a Personal Project in which every staff member from East Millbrook, Broughton, and Daniels participates and evaluates.

GT Program

Responding GT magnet school principals concurred that the instructional approaches within the GT program are not available in non-magnet schools. Such instructional approaches include more opportunities for involvement in the arts and individualized academic instruction for cohorts of Academically Gifted (AG) students. One principal explained that GT magnet schools offer alternative educational options for WCPSS families.

> Parents seek out the GT program because they find their child disinterested in the program offered at their traditional school.…At a traditional school, students are given 45 minutes a week to develop a love for music and art. At a GT Magnet School, they can experience everyday (if they choose to) dance, drama, art, music, instrumental music etc.

Principals at Fuller and Hunter Elementary Schools, which are the two GT magnet schools that offer the AG Basics Program, commented on their method of service delivery to AG students.

> … offering students academic and arts electives throughout the school year is different from non-magnet school instructional programs. Additionally, the service delivery for AG identified students at this school is different from the delivery in non-magnet schools. This model allows students to receive core academic instruction daily with their intellectual peers who also qualify for AG services.
>
> …Students identified as AG are grouped together for their core curriculum in the areas of Math and Language Arts.…The approach at Hunter is unique in that each child moves at his/her own pace through the Language Arts curriculum with no end in sight - we have broadened the minimum standard and allow students to continue to their highest potential.

Leadership

Principals of leadership magnet schools share an instructional approach distinctive to this theme. These principals described how teachers use popular literature such as Stephen Covey's "The 7 Habits of Highly Effective People" to enhance learning and daily decision-making skills. The A.B. Combs Elementary School principal offered an illustration of this approach.

> Students at A.B. Combs Leadership Magnet Elementary School are provided with training on how to make Dr. Stephen Covey's 7 Habits of Highly Effective People part of their daily lives. Our stakeholders, including students, experience the buy-in and personal empowerment that is afforded to them due to our focus on the Baldrige Principles. These two core philosophies are interwoven into everything that we do at our school. As our model continues to reach the unique needs of all learners in the 21st century we have added layers based on research in the following areas: Rigor & Relevance (Bill Daggett), Professional Learning

> Communities (Rick DuFour), Essentials in Leadership (Ron Clark), Brain Research (Robert Cooper), Emotional Intelligence (Mel Levine) and 7 Correlates of Effective Schools (Larry Lazotte). While pieces from the above may be in traditional schools, the way we weave them together using Covey and Baldrige is unique.

Project-Based Learning

Principals from a variety of thematic magnet schools suggested that project-based learning approaches, which connect students' academic studies to events in the community, are uniquely implemented at their magnet school. Two elementary school principals described methods of integrating cultural activities and program curricula.

> Curriculum is taught in an integrated approach and students are able to develop a project that demonstrates their learning and understanding of a unit of study. These projects are then exhibited within our school or community and viewed by an authentic audience. Students are making real world connections with their day to day curriculum through these projects.…Teachers examine their upcoming curriculum and work with the magnet coordinator to make connections to the local museums. Students are able to go to these museums (multiple times during the year) and introduce, re-enforce, or sum up a unit of study-----again making connections to the real world through our day to day curriculum.

> We integrate technology throughout the instructional day so that students see how technology supports and facilitates learning. Through excursions to nearby points of interest (NCSU, state parks, museums, businesses, etc.) and "expert" speakers with extensive knowledge of particular topics of study, our students better understand how they are connected to their immediate community.

The Lincoln Heights Elementary School principal offered a similar example based on the school's community model.

> Our students participate in instructional activities that are tied to the real world through Community Centers the last 40 minutes of the instructional day. These classes are taught by all members of the staff, including the Principal! Examples of Community Centers include Bengal Bucket Band, where students play drums on old buckets and perform in the community, KNOW, a news broadcast class that integrates literacy skills with television production. Students can choose from a wide range of Community Centers three times a year. Their choices match not only their interests, but also their academic needs. The Community Centers give students a chance to be exposed to different teaching methods and different delivery of curriculum, increasing the likelihood of mastery.

Additional Educational and/or Non-Curricular Opportunities

Q. What additional educational and/or non-curricular opportunities does your magnet school offer students that are linked to the magnet theme?

Principals commonly cited elective offerings such as art, music, drama, foreign languages, and community service projects as additional educational and non-curricular opportunities offered at their schools.

Elective Offerings

The majority of GT, IB, and Creative Arts and Sciences magnet school principals responding to this survey remarked on the extensive elective options offered within their program. Two comments from principals are particularly noteworthy.

> Martin GT Magnet Middle School offers elective options together with rigorous core instruction that is differentiated to meet the needs of all students. The structure of our schedule allows maximum student choice so they are able to expand their gifts and talents well beyond the core curricula. It would be possible for a student to take up to twelve different electives per year.

> The class lists for electives goes on and on encompassing over 60 electives choices each quarter for our students.…The inclusion of Special Education students into the Elective program allows for all students to experience success.…The academic rigor of the program for all students with increased expectations and the addition of electives and exposure to all of the Arts through specials make the AG/GT Program REMARKABLE!!

Community Service

Principals of IB magnet schools described community service as a non-curricular opportunity offered at their school that is linked to the IB Programme. The examples of community service that these principals provided reflect the international theme of this program. Principals gave examples of students and staff traveling to Guatemala to perform community service, and schools establishing educational exchanges and service projects with France, Germany, and Peru. One principal explicitly stated that the IB Programme mandates community service opportunities.

> We offer our students opportunities for community service, as that is a requirement of our IB program. We integrate the curriculum to tie in community service so that students can make connections to the "outside world" as we move through the curriculum. We have an international exchange program based on our IBMYP with a sister city in Japan.

Adopted Instructional Opportunities/Approaches

Q. Are you aware of any instructional opportunities or approaches provided at your magnet school that non-magnet schools have adopted? If yes, please describe.

Approximately two-thirds of magnet school principals were aware of instructional opportunities or approaches adopted by non-magnet schools. Instructional adoptions most commonly mentioned include curriculum mapping, transferable philosophies, and environments for systemic change.

Curriculum Mapping

A common instructional opportunity several magnet school principals mentioned, which was once a cornerstone unique to magnet schools, is the integration of core curriculum and the arts at non-magnet schools. One principal observed, however, that this approach may not be fully implemented at non-magnet schools.

> Yes, other non-magnet middle schools work to include flexible scheduling and integrated units of study; however they are only able to provide flexible scheduling and curriculum mapping options in an altered format.

One middle school principal commented on the quality of the arts programs throughout WCPSS.

> Many of the traditional schools have developed Arts programs that rival some of the Arts programs at the Magnet schools.

Transferable Philosophies

Some magnet school principals appeared to be aware of non-magnet schools adopting approaches aligned with philosophies that have been traditionally unique to magnet schools. Principals mentioned multiple intellegences as one such approach. For example, a principal of an elementary GT magnet school stated the following.

> Many schools use multiple intelligence theory to support students' talents through their intelligences- similar to the GT philosophy.

The principal at Poe Elementary School observed that fundamental Montessori instructional methods can influence best practices at non-magnet schools.

> Differentiated lessons is a best practice that other schools have adopted that has been integral in the Montessori philosophy since its inception.

Environments for Systemic Change

Based on the responses from several principals, magnet schools appear to be ideal environments for piloting innovative instructional approaches, and if successfully implemented, these approaches are often adopted within the system. One principal connected the attention and systemic embrace of Professional Learning Communities within WCPSS to the collaborative method implemented at IB magnet schools.

> Much of the language of PLCs that is sweeping through WCPSS is a reworking of the IB collaborative process that we have been working on. IB focuses on common assessments, inquiry, setting goals, and measuring student success against established criteria.

Hunter has also been used to test the effectiveness of instructional approaches.

> As a leader in the area of Science, Hunter has piloted all of the Science kits that have since been adopted by WCPSS. Many of these kits began as electives and have evolved into matching the NCSCOS. We have also piloted the Science Notebooks and currently have several teachers presenting that staff development in the system.

Exceptionally Successful Magnet Students

Q. In your experience in the Wake County Public School System, can you recall any student(s) who achieved a great accomplishment or experienced exceptional success (e.g., college, career, projects, recognitions) that you attribute to the program offered at your magnet school? If yes, please provide an anecdote.

Almost all of the magnet school principals who completed the survey provided one or more examples of students who experienced exceptional success, which they attributed to the magnet school program offerings. Several principals pointed out that elementary and middle magnet school programs offer solid foundations for students' experiences at magnet high schools. Other principals discussed how students' experiences at magnet high schools prepare them for higher education. Finally, many principals supplied exemplars of extraordinary students who have done extraordinary things.

Foundation for High School

Principals of GT and IB elementary and middle magnet schools in particular discussed how previous students have been very successful at IB high schools. For example, some of the first IB elementary students are now the best IB students at Broughton High School. One principal mentioned a GT middle school student who became valedictorian of his/her graduating class at Enloe High School. Another principal described the strong educational foundation provided at his GT magnet middle school.

> I have seen first hand how students that have spent three years at Martin GT Magnet Middle School have excelled academically in the high school setting. Enloe and Broughton both have tremendously strong arts programs. Students that have achieved greatness for these two regularly honored high schools developed and honed their academic and artistic talents at Martin GT Magnet Middle School. Without such strong feeder GT Magnet Middle Schools like Martin, these high school programs would suffer greatly.

GT and IB principals are not alone in their praise of the preparatory benefits of elementary and/or middle magnet schools. Lincoln Heights and Poe Elementary School principals expressed similar thoughts.

> We often get emails from staff members at local middle schools describing the readiness our students exhibit upon entering sixth grade. We hear from parents about the successes their children are having at Centennial and Carnage. I believe our Community Model where so many are working on behalf of each child is directly linked to this success.

> Many of our students and their parents report back that they are on the AB honor roll and have many leadership positions when they are in middle school. They credit the independence that was instilled in them at Poe in part for their successes.

Preparation for Higher Education

Principals of GT and IB high schools also commented on the strong influence these programs had in preparing students for higher education paths. These principals remarked that students participating in the IB Diploma Programme receive college credit for many courses, are accepted to the most competitive universities, and talk about being much more prepared for college/university classes. Recently, four students at Enloe High were finalists for the Siemens award. Another principal recalled success stories of other magnet students.

> A graduate of Powell Elementary and Enloe High School was accepted to and is now pursuing a journalism degree at UNC Chapel Hill. He attributes his interest in journalism, production and TV to his experiences at Powell…. He maintained this interest while at Enloe and was manager of the morning news while he attended Enloe. I know of a young lady who excelled in the Lego-Logo programming Elective and has pursued and achieved her engineering degree from NCSU.

Extraordinary Students

Principals supplied copious exemplars of extraordinary magnet school students who have done extraordinary things. More importantly, they believe that the program offerings at their school directly affected the students' accomplishments. The principal of Bugg Elementary School mentioned that many students have gone on to become actors. One

student in particular stars in the television show "Malcolm in the Middle." The principal of Combs Elementary School detailed a prolific list of student correspondences with prominent figures such as Dr. Stephen Covey, Oprah Winfrey, Stedman Graham, Hugh Shelton, and Dr. Bill Friday. Other principals provided accounts of students whose achievement greatly improved because of their magnet school experience. Here are three examples.

> We had a male student here at Centennial all three years (6-8), who came to us as a quiet/reserved 11 year-old, in search for his identity.… He formed a rock band with two other peers and Centennial provided him with extension opportunities to explore his musical talents and new found social confidence through musical drama productions and talent shows at the conclusion of each of his academic years at Centennial. I like to believe that our small, collaborative-community model gave a young man in need of individualized attention, the confidence to further explore his once hidden greatness.
>
> ….was a troubled kid during his three years at East Millbrook. His behavior, home situation, and overall academic success were at risk, but he and his family chose to continue the five year IB MYP program at Broughton for this 9th and 10th grade year.… I attended his personal project presentation at Broughton and I saw what an IB education can do. He had chosen to do his 10th grade project on building his own business, a barber shop. He had sought out a mentor, designed a business plan, spent numerous hours learning about the steps he would have to take to reach this goal…. I feel certain that if he were not involved in a school program that focused on this inquiry based learning, he might not have been successful.
>
> … I have seen a number of students flourish in the magnet program model…. develop confidence in the ability to play an instrument, take a lead role in a theater production, and/or collecting data in a geology lab…. Many parents, from the base and the magnet population, have provided anecdotal feedback that validates the success I have seen in students.

Additional Thoughts on Expanded Educational Opportunities

Q. Would you like to share anything else about the expanded educational opportunities that are offered at your school? If yes, please give details.

Almost all respondents took the time to share their thoughts on the expanded educational opportunities at their magnet school. Evident in their individual responses is a shared belief in the value of the Magnet Program for WCPSS students and families.

Valuable Alternatives

Many principals expressed their belief that magnet schools offer academic and elective choices to students and families that are not available elsewhere. These choices not only attract students

to particular magnet schools, but the distinctive programs, pedagogical styles, and diversity within magnet schools are also personally and academically beneficial to many students. Here is what several principals said about their magnet program.

> Due to our Magnet program and status, our teachers go the extra yard to provide additional opportunities for our students such as a schoolwide play, concerts, Pieces of Gold auditions and program, etc. Those extras for the students make a difference and help us recruit students and families to our school.
>
> We have students who have not been successful at traditional schools but have made connections with the arts here at Bugg. Some of these students are unable to grasp concepts in the regular classroom but when these same concepts in reading, writing, math or science, are reinforced in music, dance, drama or PE classes, students understand and remember.
>
> Our staff believes that our magnet theme provides the opportunity to thoroughly teach the NC Standard Course of Study while offering opportunities, extensions, and connections that will prepare our students to be successful at the next level.
>
> Our students certainly have the opportunity to access a greater variety of courses and subject areas than they would if they were in a traditional program. Our school offers 300+ electives in the course of a year for K-2 and 3-5 combined.

Two elementary school principals commented that their students would not be as successful without the benefits of the magnet program.

> I believe that the connectedness that our students feel with each other and with staff and the meaningful relationships that staff members are able to build with parents as a result of our reduced class size and Community Model are highly effective at helping students overcome challenges that may prohibit them from being successful. Lincoln Heights has the highest percentage of special education students in the tested grade of any other Wake County elementary school, yet this past year we did make expected growth and showed gains in our test scores with students taking the multiple choice EOG. Without making connections with students and families through our Community Model I believe it would be impossible to make this impact and I fear that the school would return to its former state of low performing students and burned out teachers.
>
> The educational opportunities offered at Hunter are innovative and expand the curriculum. But they wouldn't be nearly as successful if we didn't also have the wide socio-economic diversity permitted by the Magnet System.

Global and Local Connections

The IB Programme within WCPSS has received national recognition and international attention. The pedagogical methods employed at Combs Elementary have also sparked the interest of international educators.

> This model has become a lighthouse to educators across the world. We have hosted visitors from 17 different countries and 39 different states over the past 8 years.

Two principals described the international and local connections made at their schools.

> Our core value of community involvement is demonstrated not only on a local level but our involvement with the global community continues to expand as we establish a strong IB and A+ culture of service and internationalism. Our students, on their own, have initiated partnerships with the International Red Cross for hurricane relief to Haiti and to victims of Katrina and the Tsunami disaster in the Asian world, and to Chernobyl children.

> Embedded in our mission you will find that Centennial has maintained a commitment to focus on technology integration. One of the most exciting opportunities is the new one-to-one laptop initiative with SASinSchools, which provides every eighth-grade student and teacher access to a laptop. Through a generous grant from SASinSchools, Centennial has received technology support through the donation of 200 laptops, wireless access points, 10 printers and 10 projectors to enhance teaching and learning and equip students with 21st Century skills.

Survey Results Summary

In their survey responses, principals described instructional opportunities and approaches uniquely implemented at their magnet schools. Many are linked to the programmatic theme of their school and a wide range of electives available to their students. In general, it appears that magnet schools are likely to provide students with additional educational and non-curricular opportunities, especially related the GT and IB theme. Magnet schools are also working models for effective instructional practices that may benefit all WCPSS students. Based on principals' responses, the various educational opportunities available at magnet schools provide students with a strong foundation for secondary and post-secondary education success as well as achievement in endeavors beyond academia. Clearly principals believe that the educational opportunities students receive at magnet schools are personally, locally, and globally valuable.

Question 4: Do magnet programs provide innovations that foster system-wide improvements?

Methodology

To acquire a historical and contemporary perspective on WCPSS Magnet Programs, E&R staff conducted interviews with former and current magnet program administrators

- Caroline Massengill; Senior Director of the Office of Year-Round Education and former magnet school teacher, magnet school principal, and Senior Director of Magnet Programs;
- Ken Branch, Senior Director of Magnet Programs; and
- Margaret Henderson, Director of Magnet Themes and Curriculum.

Informal interviews were conducted individually and lasted between 45-90 minutes. The knowledge and experiences shared by each of these administrators chronicle the life course of the magnet program, offer support for the protection of core programs, and provide insight into the current issues facing magnet schools. The following account summarizes their collective interpretations, and when appropriate, references individual commentary.

Interview Results

Magnet Schools: A System-Wide Initiative

The administrators concurred that magnet schools were originally and continue to be a system-wide initiative and that magnets were designed to help optimize the utilization of schools on a voluntary basis. Interviewees also agreed that the purpose of magnet schools has shifted from racial integration to creating and maintaining healthy schools in part through economic diversity. Nevertheless, the fundamental values that magnet schools support remain faithful.

Race-Conscious Assignment Plans

The Wake County and Raleigh City school systems merged in 1976. The issues of optimal use of facilities, educational equity, and integration all played a part in this decision. In 1982, one year after being named superintendent of WCPSS, Dr. Walter Marks proposed a Schools of Choice program that would address several needs within the system including:

- utilization of schools,
- inequity of educational opportunity,
- racial balance,
- improving educational programs,
- providing more parental participation through a program of optional schools, and
- a long-range plan for student assignment and facility use.

The Wake County Board of Education (BOE) adopted the Schools of Choice program on March 11, 1982, which essentially launched the magnet program. One administrator recalled her thoughts on the goals of magnet schools at this time. As a magnet school teacher in 1982 and a parent of a magnet school student, it never occurred to her that magnet schools were created for

desegregation purposes. Following the ideology of Superintendent Marks, she believed that magnet schools were a way for children to receive an enhanced education, which meant more computer, art, dance, drama, and foreign language opportunities. Her awareness of the desegregation issue grew when she became an administrator.

WCPSS was never under court-ordered desegregation, but in 1982 adopted an assignment plan that used race as a way to foster educational and social benefits in schools. This race-conscious policy directed schools to maintain a minority population between 15-45% and was used in reassignment decisions and magnet application selections. The population residing around downtown was primarily minority. In an effort to redistribute the racial composition of downtown magnet schools, a base population of 30% was maintained and White students were recruited to fill the magnet seats. Thus, from its inception, WCPSS magnet programs were designed to provide education innovation as a means of attracting parents and students to under-utilized schools.

The emphasis on intellectual and artistic opportunity inherent in the magnet program appeared to benefit all children. The magnet program was significant in voluntarily bringing White students to downtown schools because of the special offerings for an enhanced education. When asked about her thoughts on whether parents of White children being bussed to downtown magnet schools were anxious about the quality of reading and mathematics instruction at the magnet schools, one administrator discussed how this was not an issue at that time. Learning to read and do mathematics was an implicit expectation. She also referenced the fact that students were not yet being tested on EOG reading and mathematics exams, which were implemented in 1992, and magnet schools were not under the pressure of high-stakes testing.

Base students benefited from the magnet school experience as well. For many students, this experience offered first and long-term exposure to opportunities and electives such as music/instruments, art, and drama. In an effort to maintain no more than a 30% minority base population and accommodate magnet students, many minority students were bussed to schools located at the rim of the beltline. The inducement offered by the district for reassigning these children was the promise of a better education in more suburban schools. At that time, WCPSS had the support of minority families, the business community, political leaders, and liberal members of the community who saw bussing as a means to offer a better education, to expand economic development, or to promote equality.

Between 1998 and 2000, WCPSS discontinued using race as a tool for assigning students to schools. This cessation was partly influenced by national trends and cases within the United States Court of Appeals Fourth Circuit. Rulings within the Fourth Circuit did not favor districts that were using race to determine where students would attend school. Pre-emptive of any potential court order, WCPSS began using socioeconomic status rather than race for student assignment.

Guiding Principles and Objectives

The BOE reaffirmed their commitment to magnet schools, and in May of 1998, approved the guiding principles of magnet programs which were:

- utilization of schools,
- equity of educational opportunity,
- diverse student populations,
- program improvement, and
- parental participation and choice.

These guiding principles served as a formal restatement of the systemic issues Superintendent Marks suggested the Schools of Choice program would address in 1982. Years later, in April of 2005, the BOE convened a work session to review these guiding principles and discuss the current role of magnet schools within the district. According to one administrator who attended this meeting, BOE members concurred that magnet schools are a system-wide initiative to create healthy schools. Healthy schools are in part shaped through better utilization of school facilities by filling seats that would otherwise be empty without more student assignment, and diverse student populations defined in terms of socioeconomic status, i.e., free or reduced-priced lunch status. Following this work session, magnet program staff were directed to synthesize the 1982 issues, the 1998 guiding principles, and the 2005 work session discussion. The resulting synthesis enumerated four objectives beginning with the following statement.

Magnet programs will be used to create healthy schools throughout the WCPSS through:

- utilization of schools,
- use of choice to promote diverse student populations, reduce high concentrations of poverty, and increase student achievement,
- expanded educational opportunities, and
- promotion of program innovations that foster system-wide improvements.

Considering the effect of magnet schools on student achievement, one administrator suggested that the meaning of increasing student achievement is not adequately conveyed as this objective was written. All interviewees agreed that BOE members conceptualized the increase in student achievement to affect district-wide performance rather than individual student achievement. One interviewee did mention that in 1982 there was some concern as to whether magnet students would academically perform as well as non-magnet students because the magnitude of elective offerings meant less time devoted to the standard curriculum. At that time, there was no guide for electives. Teachers individually structured electives to relate to the curriculum. Now, however, there is a framework for electives, which is tied to the North Carolina Standard Course of Study.

Program Innovations for System-Wide Improvement

Although magnet schools were intended to be a system-wide initiative, the administrators said that the boundaries of the magnet program must be protected. WCPSS must safeguard the distinctive quality of the magnet programs to ensure that they effectively meet their objectives. Magnet schools can and do serve as resources for systemic pedagogical and program innovations; and therefore, some practices may be shared with non-magnet schools. However,

the core program components of magnet schools are important to protect. Without this protection, magnet schools would likely be less effective in attracting parents and students, and many would face the possibility of being underutilized and educating more economically homogeneous student populations.

Unique Programs

One administrator intimated that the word "unique" is somewhat of a pejorative term when referring to magnet school programs because it implies inequality. Nevertheless, all parties agreed that magnet school programs were not intended for systemic adoption and must be protected from exact duplication at non-magnet schools. This protection is vital for the survival of magnet schools because they were designed to offer distinctive, specialized programs to attract parents/students to schools that they might not attend otherwise.

The operating costs associated with implementing and sustaining many of the magnet programs restrict system-wide adoption as well. For example, Montessori training and IB instructional expenses cannot be supported throughout the system. Additionally, protecting the integrity of the package program and attracting applicants is essential for meeting the primary objectives of optimal school utilization and diverse student populations.

Incubators of Good Ideas

The administrators explained their belief that magnet schools were intended to be incubators of good ideas for magnet schools rather than for the system. Magnet schools often seek out new ideas and ways to improve the caliber of their programs and maintain their appeal. Interviewees also reflected that programs and practices within magnet schools have informed system improvement efforts, however, they characterized this influence as more of an outgrowth of expanded educational opportunities. Some non-magnet schools may try to broaden their elective offerings, for example; but the GT magnet programs are still designed to offer a greater array of specialized electives. This distinction is important for offering meaningful experiences to students in GT programs.

Even though magnet schools want to maintain the distinction of their programs, they can and often do serve as models and resources for system implementation of new techniques. Some cited examples include Southeast Raleigh High School, which the system used as a resource for effectively implementing block scheduling, and the 10^{th} grade personal project within Broughton High School's IB Programme, which can help inform implementation of the State mandated graduation project. Magnet schools do formally serve as resources for other magnets during expansion efforts. For example, when Douglas Elementary School was magnetized as a Creative Arts and Sciences Magnet, the administrators, teachers, and staff worked closely with staff at Bugg Elementary School to replicate their program.

Issues Facing Magnet Schools

Various issues and challenges facing magnet schools were on the minds of these administrators. During the interviews, each of them articulated a current issue confronting magnet schools and presented questions that will likely effect ensuing conversations.

One challenge the administrators mentioned relates to how magnet schools will respond to growth in WCPSS. The percentage of magnet applications accepted is decreasing because the overall WCPSS population is increasing and no additional magnet seats are being gained. The decrease is also attributed to the fact that year-round schools are no longer considered magnet schools. One question posed is whether the magnet program should maintain the same percentage of magnet students or respond to the growing population by serving more students.

Another subject for consideration is magnet school feeder patterns (see Appendices C and D for program continuations). According to one administrator, the decision to create a magnet theme has not always been made with a continual feeder pattern in mind. It is vital to look at the logical continuations for particular magnet themes, especially since many parents of kindergarten or 1st-grade students often make 12 or 13-year projections when they begin the magnet school application process.

Finally, there has been much discussion as to whether the magnet schools objectives should be revisited. There appears to be agreement among discussants in retaining the first two objectives; utilization of schools and use of choice to promote diverse student populations, reduce high concentrations of poverty, and increase student achievement. However, if maintained, the administrators said that "student achievement" requires a clearer definition. Additional conversation may be needed to discuss whether the last two objectives, expansion of educational opportunities and promotion of innovations that foster system-wide improvement would be more appropriately articulated as outgrowths of the first two objectives or as strategies for accomplishing these objectives. The extent to which these objectives can be empirically measured may also be considered.

Interview Results Summary

The Magnet School Program, entitled the Schools of Choice Program in 1982, was initiated as a systemic endeavor. Although the delineated purposes of this endeavor have evolved over the years, the focus on system improvement has remained relatively constant. Magnet schools have a unique task of balancing the needs of their students and the needs of the system. The former and current magnet program administrators who were interviewed concur that magnet programs provide innovations for fostering system-wide improvement, in terms of better facility use and maintaining diverse student populations, by attracting students to magnet schools. The administrators also believe the distinction of magnet school program should be protected to ensure that parents and students will choose magnet options. The survival of magnet schools is fundamental for preserving system benefits such as better utilization of schools and the promotion of diverse student populations which in turn influence academic achievement. Perhaps it is this juxtaposition of individual opportunity and system achievement, rather than bifurcation, that is the essence of the magnet program.

DISCUSSION AND CONCLUSION

This evaluation utilized quantitative and qualitative methods to review the objectives of WCPSS Magnet Programs as established in April 2005. Findings of this review indicate that magnet schools are effective at utilizing school facilities, using choice to promote diverse student populations and reduce high concentrations of poverty, and offering expanded educational opportunities.

- According to 2006-07 membership-capacity data, magnet schools are effective in optimizing the use of facility space in WCPSS. Additionally, many magnet schools and neighboring schools would experience under-utilization or unfavorable changes in the demographic composition of their student populations if demagnetization occurred.
- Data on percentages of FRL students for 2006-07 suggest that magnet schools have been an effective means of promoting diverse student populations and reducing high concentrations of poverty in WCPSS. The affluence of magnet students appears to ameliorate the economic composition of magnet schools such that the overall percentage of FRL students at magnet schools would likely increase if these schools were demagnetized.
- In their survey responses, magnet school principals describe the expanded educational opportunities that magnet schools offer WCPSS students. Instructional opportunities such as the International Baccalaureate (IB) Programme, the Gifted and Talented (GT) program, use of popular literature to enhance learning, and project-based learning, and extensive elective offerings such as art, music, drama, and foreign languages are some of the expanded opportunities principals believe would not be available without the Magnet Program.

Outcomes showing the effectiveness of the objectives pertaining to the use of choice to increase student achievement and providing innovations that foster system-wide improvements were less conclusive.

- Compared to other large school districts in the state, some with magnet schools and some without, WCPSS has a considerably higher percentage of students passing EOG and EOC exams across all student subgroups. The economic balance of WCPSS schools, which is partially maintained by the objectives of the magnet program, may contribute to these high levels of student achievement in the district. Findings from additional analyses reveal that on average, WCPSS magnet schools show similar achievement trends as their non-magnet counterparts. When comparing the individual pairs of magnet and non-magnet comparison schools, some differences in academic and performance outcomes are apparent; however, these differences tend to decrease over time.
- In their interviews, magnet program administrators describe magnet programs as providing education innovations as a means of attracting parents and students to under-utilized schools. Administrators explain that magnet schools can and do serve as resources for systemic pedagogical and program innovations, in that some practices may be shared with non-magnet schools. However, the core program components of magnet schools are important to protect. Without this protection, magnet schools would likely be

less effective in attracting parents and students and many would face the possibility of underutilization and educating more economically homogeneous student populations.

The Wake County Board of Education held a work session on March 12, 2007. One topic of discussion at this work session was a review of the Magnet Program objectives. Board members discussed the relative importance of each objectives and the extent to which each objective guides Magnet Program goal setting. At the conclusion of this work session, agreed on the revised Magnet Program objectives. These objectives appear to be consistent with the major findings of this evaluation.

WCPSS magnet programs will continue to be an important mechanism helping to:

- reduce high concentrations of poverty and support diverse populations;
- maximize use of school facilities; and
- provide expanded educational opportunities.

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Appendix A
Annotated List of WCPSS Magnet Program Reports

Evaluation & Research Reports

Penta, M. (2003). *Annual Performance Report 2002-2003: Magnet Schools Assistance Performance Grant.* Raleigh, NC: Wake County Public School System.

Beginning in 1999-2000, these Annual Performance Reports focus on the success of new initiatives in targeted schools in meeting specific federal goals.

Penta, M. (2001). *Comparing Student Performance at Program Magnet, Year-Round Magnet, and Non-Magnet Elementary Schools.* Raleigh, NC: Wake County Public School System.

This study provides an overview of demographic characteristics and student achievement outcomes of program magnet and calendar magnet elementary schools compared to non-magnet elementary schools. Findings show no statistically significant differences in schools' ABCs performance composites when they are statistically adjusted to equalize differences in race and socioeconomic status.

Rhea, A. and Regan, R. (2006). *Academically Gifted (AG) Basics Program.* Raleigh, NC: Wake County Public School System.

This study focuses on access to and academic effectiveness of the Academically Gifted (AG) Basics Program at four magnet schools in the Wake County Public School System (WCPSS). Although AG-identified students receive special instruction at all WCPSS schools, the services in AG Basics schools are different in structure and intensity. The performance of AG students at these schools, as measured by the End-of-Grade (EOG) exams, is relatively similar to other AG students in WCPSS schools.

Magnet Program Reports

U.S. Department of Education, Magnet Schools Assistance Program (MSAP) Grants.

Applications and performance reports targeting specific schools. The first MSAP grant was written in 1985 and has continued every 2-3 years.

Reports presented to the Wake County Board of Education (BOE).

Magnet program status reports and special analyses presented at the request of the BOE beginning in 1998 and continuing every 1-2 years.

Appendix B
Magnet Schools by Theme, 2005-06 to 2006-07

GIFTED & TALENTED (GT)
Fuller Elementary
Hunter Elementary
Powell Elementary
Underwood Elementary
Wake Forest Elementary*
Washington Elementary
Wendell Elementary*
Zebulon Elementary*
Carnage Middle
Ligon Middle
Martin Middle
Zebulon Middle

INTERNATIONAL BACCALAUREATE (IB)
Farmington Woods Elementary
Millbrook Elementary
Daniels Middle
East Garner Middle*
East Millbrook Middle
North Garner Middle: demagnetized 2006-07
Broughton High School
Garner High School

GT/IB HIGH SCHOOL
Enloe High

COMMUNITY MODEL
Lincoln Heights Elementary

CREATIVE ARTS & SCIENCE
Bugg Elementary
Douglas Elementary

ACTIVE LEARNING & TECHNOLOGY
Conn Elementary

INTERNATIONAL STUDIES
Wiley Elementary

CENTER FOR SPANISH LANGUAGE/IB PRIMARY YEARS PROGRAMME (PYP)
Joyner Elementary

LEADERSHIP
Combs Elementary
Root Elementary

MONTESSORI
Poe Elementary

UNIVERSITY CONNECTIONS
Olds Elementary

UNIVERSITY & LEADERSHIP
Centennial Campus Middle

CENTER FOR LEADERSHIP & TECHNOLOGY
Southeast Raleigh High

MUSEUMS
Brooks Museums Magnet Elementary
Moore Square Museums Magnet Middle

WAKE EARLY COLLEGE OF HEALTH & SCIENCES
Wake Early College High: magnetized in 2006-07

* Equity magnets serve base students only.

Appendix C
Program Continuation for Elementary Magnet Schools

In order to increase the probability of being selected for a magnet middle school, students should follow their program continuation.

Creative Arts
- ➔ International Baccalaureate/Creative Arts

Gifted and Talented
- ➔ Gifted and Talented

Gifted and Talented with AG Basics
- ➔ GT/AG Basics

Community Model
- ➔ Museums

Leadership
- ➔ Leadership

Museums
- ➔ Museums

University Connections
- ➔ University Connections/Leadership

Active Learning & Technology
- ➔ Museums OR University Connections/Leadership

Center for Spanish/IB
- ➔ International Baccalaureate

International Baccalaureate Primary Years Programme (IB PYP)
- ➔ International Baccalaureate Middle Years Programme (IB MYP)

International Studies
- ➔ Gifted and Talented

Montessori
- ➔ Museums

Appendix D
Program Continuation for Middle Magnet Schools

In order to increase the probability of being selected for a magnet high school, students should follow their program continuation.

Creative Arts and Science
- ➔ International Baccalaureate

Gifted and Talented
- ➔ Gifted and Talented

University Connections and Leadership
- ➔ Leadership and Technology

International Baccalaureate MYP
- ➔ International Baccalaureate MYP/Diploma Programme (DP)

Museums
- ➔ Leadership and Technology OR International Baccalaureate