CHAPTER V
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The primary purpose of this study was to determine the effects of the Aerospace Technology Magnet Program at Hunt-Mapp Middle School on eighth grade student performance as it relates to academic achievement and attendance. A secondary purpose was to compare the perceptions of parents of magnet and non-magnet students at Hunt-Mapp Middle School as viewed by the correlates of effective schools research. This chapter presents conclusions based on the findings in Chapter 4 and the review of literature in Chapter 2. The discussions of these conclusions is divided into two sections: 1) major findings and 2) directions for future research.

This study reported descriptive data for the four years the Aerospace Technology Magnet Program at Hunt-Mapp Middle School has been in existence. This information provided data on the percentage of black and white students within the district, the city of Portsmouth, and the magnet program. This study confirmed the previous findings of Larson et. al (1993) and Musumeci and Szczypkowski (1993) which concluded that racial balance goal was effective drawing many white students to attend pre-dominantly black schools. The number of students involved in the magnet program has increased over the years and there has been continued interest evidenced by the number of students reported on the waiting list each year.

This study analyzed the eighth grade Stanford Achievement Test score distributions for the students at Hunt-Mapp Middle School. An analysis of covariance
(ANCOVA) was performed on each composite of the Stanford Achievement Test to determine if there was a significant interaction among the independent variables: group membership (magnet, non-magnet), gender (male, female), and race/ethnicity (black, white). Socio-economic status and LPT scores of students served as covariates in the study because of their relationship to the dependent variables. All analyses were tested at the .05 pre-determined alpha level for significance.

Attendance data for the 1996-97 school year was analyzed for the eighth grade students at Hunt-Mapp Middle School by performing an ANCOVA to determine if there was a statistically significant interaction among the group membership (magnet, non-magnet), gender (male, female), and race/ethnicity (black, white). Socio-economic status and LPT scores of students were used again as covariates. Parents of students at Hunt-Mapp Middle School were surveyed to see if there was a statistically significant difference in the perceptions of the school between magnet and non-magnet parents’ views as related to effective schools research.

**Major Findings**

The findings support the research of Blank and Archbald (1992) and Ross (1994) which indicated that improved academic achievement for all students is a key objective of magnet school programs. On each of the components of the Stanford Achievement Test, eighth grade students enrolled in the Aerospace Technology Magnet Program achieved statistically significant higher than eighth grade students in the regular school program, after adjusting for the initial differences in SES and LPT scores. One of the objectives of the magnet program initiative in Portsmouth Public Schools was to increase the achievement of the black students. In measuring achievement differences by race/
ethnicity, the data showed that white students exhibited a slightly higher increase in math, reading, language arts, and social studies. These differences were not considered statistically significant. However, when science achievement was measured, the difference was statistically significant. Simply, white students obtained a greater increase in science scores than their black students. This was the same assessment that was reported with the NAEP report (1994).

In examining achievement differences as reported by gender, it was found that female students outperformed male students in reading and language arts. Conversely, male students achieved higher than female students in math, science, and social studies. Statistically significant difference was found in science achievement, in which the male students outperformed the female students.

Attendance data reported that magnet students reported to school more than non-magnet students. Female students were out of school more than male students. Also, black students were absent from school more than white students. The only statistically significant difference was found between the magnet and non-magnet students. It may be concluded that students who attend school experience higher levels of academic achievement.

When examining the perceptions of parents about Hunt-Mapp Middle School, it was reported there was no statistically significant difference between the perceptions of magnet parents and non-magnet parents. Both groups of parents felt Hunt-Mapp Middle was a ‘good’ school.

The study produced several conclusions regarding magnet school programs. The Aerospace Technology Magnet Program at Hunt-Mapp Middle School has been
successfully utilized as a method for reducing racial/ethnic isolation. Prior to the study, there was inconclusive evidence regarding differences in achievement of magnet and non-magnet students. Magnet students demonstrated a higher level of achievement on all composites of the standardized test than did non-magnet student. Magnet school programs have served as a successful tool in attracting whites to schools which were predominantly black.

**Suggestions for Future Research**

The rich data base used for the analyses of the this study could be used to follow the achievement progress of the same 177 students through the high school level. Longitudinal studies should be conducted to determine long term effects of magnet education on student performance. The holding power of magnet programs should be explored to determine the rate of graduation of magnet versus non-magnet students.

A broader study could include a randomly selected group of students in a different school. Threats to internal validity may be attributed to the fact that achievement analyses was done at one school site, resulting in a small sample of students.

Technology is an integral part of the magnet program at Hunt-Mapp Middle School. Computer technology achievement may be measured based on the Stanford Achievement Test measuring computer competency. The impact of computer technology knowledge maybe examined through the first time administration of the computer standards of learning.

Standardized test scores do not pick up the small differences. Analyses can be conducted using the classroom grades as a variable. Course selection of eighth grade students may be examined to gather data of the number of students taking Algebra I.
Summary

Student achievement is but one gauge of educational effectiveness and quality however, it remains the most quantifiable measure of a student’s academic progress. A school must maintain academic achievement performance of its students, or it will ultimately lose its ability to ‘attract’ students. Without sound academic achievement in the basics, the positive image of a school program will become blurred, and all affective benefits of the program will be lost if the program is discredited. The magnet program in this present study has proven its effectiveness in academic achievement, especially with the respect to math and science, the two targeted areas.